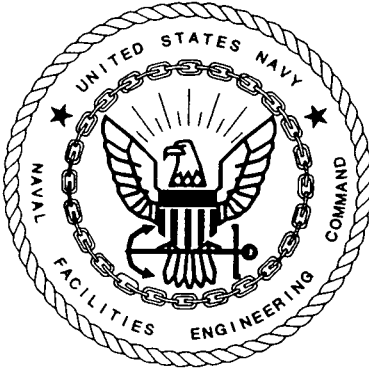


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FACILITY RESPONSE PLAN NAS CORPUS CHRISTI TX  
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NAVAL AIR STATION  
CORPUS CHRISTI  
CORPUS CHRISTI, TEXAS  
FACILITY RESPONSE PLAN

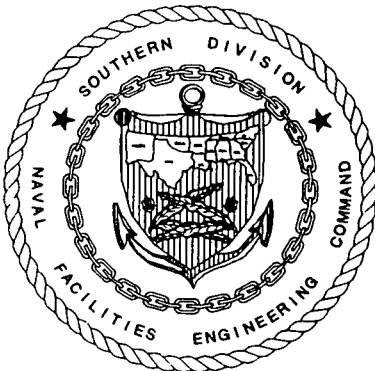


SOUTHNAVFACENGCOM  
CONTRACT NUMBER:  
N62467-89-D-0318  
CTO - 091

Prepared by:

EnSafe/Allen & Hoshall  
5720 Summer Trees Drive, Suite 8  
Memphis, Tennessee 38134  
(901) 383-9115

The Contractor, EnSafe/Allen & Hoshall, hereby certifies that, to the best of its knowledge and belief, the technical data delivered herewith under Contract No. N62467-89-D-0318 is complete, accurate, and complies with all requirements of the contract.



Date January 24, 1996  
Signature *John Cooper Reed*  
Name: John "Jack" Cooper Reed  
Title: Task Order Manager

January 24, 1997

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**NAS CORPUS CHRISTI  
CORPUS CHRISTI, TEXAS  
FACILITY RESPONSE PLAN**

**Under:**

**Southern Division  
Naval Facilities Engineering Command  
Charleston, South Carolina  
Contract Number: N62467-89-D-03180091**

**Developed by:**

**EnSafe/Allen & Hoshall  
5724 Summer Trees Drive  
Memphis, Tennessee 38134  
(901) 372-7962**

**Final  
July 1996**

**NAVAL AIR STATION CORPUS CHRISTI  
CORPUS CHRISTI, TEXAS  
FACILITY RESPONSE PLAN**

**Owner:**

**U.S. Navy  
Southern Division  
Naval Facilities Engineering Command  
Code 1847  
2155 Eagle Drive  
Charleston, South Carolina 29418**

**Operator:**

**U.S. Navy**

**Mailing Addresses:**

**Commanding Officer  
Naval Air Station  
1101 D Street, Suite 143  
Corpus Christi, Texas 78419-5021**

**Phone: (512) 939-2123**

**Fax: (512) 939-3402**

**Final July 1996**

# **OPA 90**

**Naval Air Station Corpus Christi**

**Corpus Christi, Texas**

**Response Plan**

**Revised Final July 1996**

**Implementing Instruction**

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## NAS Corpus Christi Instruction 5090.1

From: Commanding Officer, NAS Corpus Christi

Subj: Facility Response Plan

Ref: (a) 40 CFR 300, National Oil and Hazardous Substances Contingency Plan  
(b) 40 CFR 264 and 265, RCRA Hazardous Waste Regulations  
(c) OPNAVINST 5090.1B, Navy Environmental Protection Manual  
(d) 33 CFR 154, Subpart F - Response Plans  
(e) 40 CFR 112 and 110, Oil Pollution Prevention and Discharge of Oil  
(f) 49 CFR 130, Oil Spill Prevention and Response Plans  
(g) 49 CFR 194, Response Plans for Onshore Oil Pipelines

1. Purpose. To provide a contingency plan that establishes policy, responsibilities, and procedures for the control and cleanup of oil and hazardous substance spills within the Naval Air Station (NAS) Corpus Christi, Texas jurisdiction.
2. Cancellation. None. This is a new instruction.
3. Scope. This plan is effective for the land and water within NAS Corpus Christi property boundaries and under the command authority of the Commanding Officer, NAS Corpus Christi. The plan applies to oil and hazardous substances (HS) spills into air, water, or land, originating from any NAS Corpus Christi department, tenant activity, or any other organization or private contractor working within NAS Corpus Christi property boundaries.
4. Background.
  - a. A variety of HS is stored and used in small quantities at NAS Corpus Christi as a result of routine operations. References (a) and (b) establish specific contingency planning requirements to better control and reduce the harmful effects (e.g., environmental degradation, property damage, and bodily injury) resulting from HS mismanagement and spills.
  - b. Large quantities of purchased petroleum products are stored at various locations at NAS Corpus Christi. The discharge of harmful quantities of oil into navigable waters of the United States is prohibited. In addition, oil spills create visible and lasting effects on wildlife, beaches, boats, and ships, as well as create a risk of fire or explosion. A Spill Prevention, Control, and Countermeasures (SPCC) Plan, as required by reference (e), has been developed for NAS Corpus Christi to decrease the potential for oil spills.
  - c. Reference (c) implements Navy policy for the management of oil and hazardous substance releases from Navy shore activities. Reference (c) requires NAS Corpus Christi to develop and implement an Oil and Hazardous Substance Spill Contingency Plan, and to designate a Qualified Individual to implement the response plan and obligate funds for response and an Incident Commander to direct and coordinate spill response operations.

COMNAVRESFOR, New Orleans, Louisiana, has been designated to act as Navy On-Scene Coordinator (NOSC) or Regional Incident Commander with overall responsibility for regional

response to spills within an assigned geographic area of responsibility, which includes NAS Corpus Christi.

5. Policy.

- a. NAS Corpus Christi will fully support and implement the requirements of references (a) through (g).
- b. The NAS Corpus Christi policy is to manage oil and hazardous substances so-as to prevent accidents, fires, and spills, and to train personnel in procedures for the effective control of accidents, fires, or spills when they occur.
- c. The policies and responsibilities established in this instruction shall be fully implemented in conjunction with those described in the accompanying Oil and Hazardous Substance Spill Contingency Plan, which establishes the NAS response organization and outlines the functions and responsibilities of the Incident Commander, response management team, and other Incident Command System team members.
- d. In the event of any oil or HS spill, the response actions and standard operating procedures detailed in the plan and the site-specific actions described in the site-specific plans shall be carried out regardless of the extent or severity of the spill. A special spill response team, the Incident Command System team, shall be assembled and trained to provide expertise in carrying out the necessary response actions.
- e. Response personnel shall become thoroughly familiar with the content and use of this plan before it needs to be activated during a spill event.
- f. NAS Corpus Christi will strictly adhere to the equipment, logistics and personnel training requirements of the plan.

6. Action. In accordance with the requirements and guidance contained in this plan:

- a. Commanding Officer, NAS Corpus Christi, is designated as the Qualified Individual and Incident Commander.
- b. This plan shall be reviewed and updated after each incident involving activation of the plan, but no less often than annually.

---

Commanding Officer  
NAS Corpus Christi

Distribution:

Fire Department  
NAS Safety  
NAS Environmental Coordinator  
NAS Security  
FISC Fuels Manager  
NAS Public Affairs  
NAS Legal

**Note:** This plan is designed such that only the Emergency Response Action Plan section need be distributed to an activity's various storage or transfer facilities. Both the Facility Response Plan and the Emergency Response Action Plan sections should be maintained by the Incident Commander (IC), Deputy Incident Commander (DIC), spill management team (SMT) members, and others who may need to have access to the more in-depth data provided in the Facility Response Plan.

## **INTRODUCTION**

### **Introduction/Plan Format**

The Navy has historically used a two-level response planning concept to provide for prompt initial response at the facility level, backed by additional regional resources to combat spills exceeding local capabilities. Under the Oil Pollution Act of 1990 (OPA '90) regulations, The Department of Defense DOD), through the Defense Fuel Supply Point (DFSP) will continue to use a tiered response and planning strategy.

Facility plans will address response resources necessary to respond to spills up to the maximum most probable and will define the worst-case discharge volume. Regional plans will include the worst of the worst-case spill volumes identified in the facility plans for each U.S. Coast Guard Marine Safety Office (MSO) zone and/or U.S. Environmental Protection Agency (EPA) region and address response resources needed to respond to a spill of that size. Adjustments may be necessary to reflect individual EPA regional requirements.

The NAS Corpus Christi plan included herein will address the area within the property limits of the government-owned and leased lands and any waters flowing through, past, or from those lands. The predesignated Regional Qualified Individual, Chief of Naval Air Training, Corpus Christi, Texas, is responsible for response preparedness for the Corpus Christi area. The plans will address both oil and hazardous substance spill response and applicable state and local planning requirements.

Both the facility plan and the regional plan are required to meet the response planning and response preparedness standards established by OPA 90 and will be submitted for regulatory review as separate documents. Since Navy facilities are normally "complex facilities," recommended plan formats listed in the regulations cannot be followed. Therefore, as provided for in the regulations, a cross-reference index is provided to aid the regulatory review process. The following abbreviated introductory facility information is provided in Table ERAP-1.

**Facility Information:**

<b>Table ERAP-1</b> <b>Facility Information</b>		
<b>Facility Identification</b>	<b>Name</b>	NAS Corpus Christi
	<b>Owner</b>	U.S. Navy
	<b>Sic Code</b>	9711 (National Security)
	<b>Mailing Address</b>	Commanding Officer Naval Air Station Corpus Christi 11001 D Street, Suite 143 Corpus Christi, Texas 78419-5021
	<b>Physical Location</b> (Reference to a River Mile or Some Prominent Landmark)	The facility's northern boundary is along Corpus Christi Bay, the southern boundary is along the Texas mainland, the western boundary is along Oso Bay, and the eastern boundary is along the Laguna Madre.
	<b>County</b>	Nueces County
	<b>Latitude</b>	27° 42' 30" North
	<b>Longitude</b>	97° 17' 30" West
<b>Qualified Individual</b>  (Emergency Response Coordinator)	<b>Name</b>	Richard W. Strickler, CAPT, USN
	<b>Position/Title</b>	Commanding Officer
	<b>Address</b>	Commanding Officer NAS Corpus Christi 11001 D Street, Suite 143 Corpus Christi, Texas 78419-5021
	<b>Commercial Work Phone</b>	(512) 939-2332
	<b>DSN</b>	--
	<b>Fax Number</b>	(512) 939-3402
	<b>24-hour Emergency Phone</b>	(512) 939-2383
<b>Alternate Qualified Individual</b>  (Alternate Emergency Response Coordinator)	<b>Name</b>	K. White, CDR, USN
	<b>Position/Title</b>	Public Works Officer
	<b>Address</b>	Commanding Officer NAS Corpus Christi 11001 D Street, Suite 143 Corpus Christi, Texas 78419-5021
	<b>Commercial Work Phone</b>	(512) 939-3664
	<b>DSN</b>	--
	<b>Fax Number</b>	(512) 939-3373
	<b>24 Hour Emergency Phone</b>	(512) 939-2383

Table ERAP-1 Facility Information		
Regional Qualified Individual  (Regional Emergency Response Coordinator)	Name	G. Clifford, CDR, USN
	Position/Title	Assistant Chief of Staff, Facilities Management
	Address	Department of the Navy COMNAVRESFOR New Orleans, Louisiana
	Commercial Work Phone	(504) 678-5085
	DSN	--
	Fax Number	(504) 678-5313
	24 Hour Emergency Phone	(504) 678-5429
Alternate Regional Qualified Individual  (Alternate Regional Emergency Response Coordinator)	Name	--
	Position/Title	--
	Address	--
	Commercial Work Phone	--
	Fax Number	--
	24-hour Emergency Phone	--
Major Claimant	Point of Contact	Department of the Navy COMNAVRESFOR New Orleans, Louisiana
	Commercial Work Phone	(504) 678-5085
Cognizant EPA Region	Point of Contact: EPA Region VI	Ron Gougnet
	Commercial Work Phone	(214) 665-2222
Cognizant USCG District Office	Point of Contact: Eighth CG District	J.W. Calhoun, CAPT, USCG
	Commercial Work Phone	(504) 589-6271
Cognizant USCG Marine Safety Office	Point of Contact	Marine Safety Office Corpus Christi T. Rodino, CAPT, USCG
	Commercial Work Phone	(512) 888-3192



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#### Immediate Spill Response Emergency Action Plan

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**TAB A — QI: QUALIFIED INDIVIDUAL**

**1.0 QUALIFIED INDIVIDUAL INFORMATION**

<b>Table ERAP A.1</b> <b>Qualified Individual Information</b>		
<b>Qualified Individual</b>  (Emergency Response Coordinator/ Incident Commander [IC])  <b>Response Time: 30 minutes</b>	<b>Name</b>	CAPT. Richard W. Strickler, USN
	<b>Position/Title</b>	Commanding Officer
	<b>Address</b>	Commanding Officer Naval Air Station Corpus Christi 11001 D Street, Suite 143 Corpus Christi, Texas 78419-5021
	<b>Commercial Work Phone</b>	(512) 939-2332
	<b>DSN</b>	
	<b>Fax Number</b>	(512) 939-2123
	<b>24-Hour Emergency Phone</b>	(512) 939-2383
<b>Alternate Qualified Individual</b>  (Alternate Emergency Response Coordinator / Alternate Qualified Individual [AIC])  <b>Response Time: 30 minutes</b>	<b>Name</b>	K. White, CDR, USN
	<b>Position/Title</b>	Public Works Officer
	<b>Address</b>	Commanding Officer NAS Corpus Christi 11001 D Street, Suite 143 Corpus Christi, Texas 78419-5021
	<b>Commercial Work Phone</b>	(512) 939-3664
	<b>DSN</b>	
	<b>Fax Number</b>	(512) 939-3373
	<b>24-Hour Emergency Phone</b>	(512) 939-2383

Table ERAP A.1 Qualified Individual Information		
<b>Regional Qualified Individual</b>  (Regional Emergency Response Coordinator / Alternate Qualified Individual (RIC))  <b>Response Time: 6-12 hours</b>	Name	G. Clifford, CDR, USN
	Position/Title	Commanding Officer
	Address	COMNAVRESFOR New Orleans, LA
	Commercial Work Phone	(504) 678-5085
	DSN	
	Fax Number	(504) 678-5313
	24-Hour Emergency Phone	(504) 678-5429
<b>Alternate Regional Qualified Individual</b>  (Alternate Regional Emergency Response Coordinator / Deputy RIC)  <b>Response Time: 6-12 hours</b>	Name	To be determined
	Position/Title	"
	Address	"
	DSN	"
	Commercial Work Phone	"
	Fax Number	"
	24-Hour Emergency Phone	"

## **2.0 NAS CORPUS CHRISTI EMERGENCY ACTION CHECKLISTS**

The following NAS Corpus Christi Emergency Action Checklists are provided to expedite Emergency response. Although these forms are found else where in this contingency plan, they have been placed here for ease of access and for immediate use.

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# **NAS Corpus Christi Emergency Action Checklist**

NAS Corpus Christi Emergency Action Checklist			
Incident Name:			
Status			Steps to be Taken in an Emergency Situation
Done	To Do	N/A	Item to be Accomplished
			1. Identify the source of the spill.
			2. Provide first aid to any injured, call 911 if assistance is required.
			3. Notify:
			a. Emergency Notification: NAS Corpus Christi Fire Department . . . . . 911/3333
			b. NAS Corpus Christi Environmental Office . . . . . (512) 939-2170 Day . . . . . (512) 939-2383 Through Duty Officer after hours
			c. Due to complexity of NAS Corpus Christi, see ERAP Tab E for listing of Immediate Response Teams
			4. Stop the flow of oil (without endangering personnel)
			a. close valve
			b. tighten gasket
			c. shut down pump
			d. any necessary action to stop the flow of oil
			5. Close all spill drains
			6. Close/stop all downstream drains
			7. Estimate the amount and type of oil spilled.
			8. Secure the area
			9. Identify hazards and immediate areas threatened.
			10. Make Initial Notifications
			a. Fire/Police/Medical . . . . . 911/3333
			b. National Response Center . . . . . 1-800-424-8802
			c. USCG MSO Corpus Christi . . . . . (512) 888-3162
			d. USEPA Region VI . . . . . (214) 665-2222
			e. Corpus Christi Area Oil Spill Control Association. . . . . (512) 882-2656 . . . . . (512) 877-8463 Cellular
			f. Any spill or release into the environment in coastal areas to:  General Land Office (GLO) . . . . . 1-800-832-8224 24-hour Phone  Any spill or release into the environment in non-coastal areas, including air releases and fires within the state to:  Texas Natural Resource Conservation Commission (TNRCC) . . . . . (512) 851-8484  Emergency Response Team . . . . . (512) 239-2507 . . . . . (512) 463-7727 24-hour Phone

NAS Corpus Christi Emergency Action Checklist			
Incident Name:			
Status			Steps to be Taken in an Emergency Situation
Done	To Do	N/A	Item to be Accomplished
			g. Local Emergency Planning Committee (LEPC) . . . . . (512) 880-3701
			11. Activate contingency plan (commence with initial forms this section and follow all posted Emergency Recall procedures).
			12. Ensure all additional local, state, and federal notifications are completed and logged.
			13. Initiate cleanup.

## A-1 Notification Form

**Table ERAP A-2: Notification Form** summarizes the initial and follow-up notification information required by the NCP and 49 CFR 195 as the status of an incident changes over its duration. (Note: This form is identical to that in ERAP, Tab C and is produced below to simplify use of the NAS Corpus Christi Facility Contingency Plan).

### Spill Response Notification Form National Response Center 1-800-424-8802

**Note:** It is not necessary to wait for all information before calling the NRC. This form is to be used for Initial Notification and all follow-up notifications. Action should be assigned by the QI for initial and follow-up completion.

Table ERAP A.2 Response Notification Form	
Incident Identification Name:	
Reporter Information	
Reporter's/ Operator's Name	
Last	
First	
Reporter's Phone Number	NAS Corpus Christi: (512) 939-2123
Company	NAS Corpus Christi, Corpus Christi, Texas
Organization Type	Naval Air Station
Position	
Address	c/o Commanding Officer, NAS Corpus Christi, 11001 D Street, Suite 143
	City: Corpus Christi
	State: Texas
	ZIP Code: 78419-5021
Were Materials Released/Discharged	<input type="checkbox"/> Yes <input type="checkbox"/> No
Confidential	<input type="checkbox"/> Yes <input type="checkbox"/> No
Time Call Received	(use 24-hour time)

**Table ERAP A.2  
Response Notification Form**

<b>Incident Identification Name:</b>	
<b>Incident/Spill Description</b>	
Source and/or Cause of Incident: Reason for Spill	
Date of Spill	
Time of Incident	(use 24-hour time)
Incident Address/Location	
Nearest City	
County	
State	
ZIP Code	
Distance from City (miles)	
Section	
Township	
Range	
Tank or Pipeline Construction	
Estimated Volume Discharged (include units)	
Facility Latitude	27° 42' 30" North
Facility Longitude	97° 17' 30" West
Weather Conditions On-Scene	

**Table ERAP A.2  
Response Notification Form**

**Incident Identification Name:**

**Incident/Spill Description Continued**

**Material/Oil Discharged**

☐ Yes

☐ No

**CHRIS Code —**

**Quantity Released —** (include units)

**Material Released into Water —** ☐ Yes ☐ No

**Quantity Released into Water —** (include units)

**Response Actions**

**Initial Actions Taken to  
Correct Incident/Initial  
Actions Taken by Personnel  
on Scene**

**Follow-up Actions Taken to  
Control Incident/Follow-up  
Actions Taken by Personnel  
on Scene**

**Actions Taken to Mitigate  
Incident/Actions Planned by  
Persons on Scene**

Table ERAP A.2 Response Notification Form	
Incident Identification Name:	
Response Actions Continued	
Actions Taken to Mitigate Incident/Actions Planned by Persons on Scene	
Impact	
Number of Injuries	
Number of Deaths	
Evacuation(s) Required	<input type="checkbox"/> Yes <input type="checkbox"/> No
Number Evacuated	
Was There Any Damage	<input type="checkbox"/> Yes <input type="checkbox"/> No
Damage in Dollars (estimated)	
Medium Affected	
Description of Effect	
Additional Information about Medium Affected	
Additional Information  Any information about the incident not recorded elsewhere in the report	

**Table ERAP A.2  
Response Notification Form**

**Incident Identification Name:**

Notification Status	Contacted?	Date Contacted	Name/Contact	Call Back Phone Number
Fire/Police/Medical 911 (512) 939-3333	<input type="checkbox"/> Yes <input type="checkbox"/> No			
NRC 1-800-424-8802	<input type="checkbox"/> Yes <input type="checkbox"/> No			
USCG MSO Corpus Christi (512) 888-3162	<input type="checkbox"/> Yes <input type="checkbox"/> No			
EPA Region VI (214) 665-2222	<input type="checkbox"/> Yes <input type="checkbox"/> No			
Texas General Land Office (Coastal Incident) 1-800-832-8224	<input type="checkbox"/> Yes <input type="checkbox"/> No			
Texas Natural Resource Conservation Commission (TNRCC) (Non-Coastal Incident) (512) 851-8484	<input type="checkbox"/> Yes <input type="checkbox"/> No			
(Non-Coastal Incident) Emergency Response Team (512) 463-7727 (24-hour) (512) 239-2507	<input type="checkbox"/> Yes <input type="checkbox"/> No			
Corpus Christi Area Oil Spill Control Association (512) 882-2656 (512) 877-8463 (Cellular)	<input type="checkbox"/> Yes <input type="checkbox"/> No			
NAVSUPSALV (703) 607-2758	<input type="checkbox"/> Yes <input type="checkbox"/> No			
LEPC (512) 880-3701	<input type="checkbox"/> Yes <input type="checkbox"/> No			

**Table ERAP A.2  
Response Notification Form**

**Incident Identification Name:**

Other Contacts	Contacted?	Date Contacted	Name/Contact	Call Back Phone Number
	<input type="checkbox"/> Yes <input type="checkbox"/> No			
	<input type="checkbox"/> Yes <input type="checkbox"/> No			
	<input type="checkbox"/> Yes <input type="checkbox"/> No			
	<input type="checkbox"/> Yes <input type="checkbox"/> No			
	<input type="checkbox"/> Yes <input type="checkbox"/> No			
	<input type="checkbox"/> Yes <input type="checkbox"/> No			
	<input type="checkbox"/> Yes <input type="checkbox"/> No			

<b>Form: Initial Incident Information</b>		
<b>Incident Name:</b>	<b>Date:</b>	<b>Time:</b>
<b>Map Sketch (Note: Indicate North with Arrow)</b>		
<b>Prepared by:</b>	<b>Position:</b>	
<b>Approved by:</b>	<b>Position:</b>	







<b>Form: Initial Incident Information: Current Organizational Chart</b>		
Incident Name:	Date:	Time:
<b>Current Organizational Chart</b>		
<div style="margin-bottom: 10px;"> <b>INITIAL RESPONSE</b>  <div style="border: 1px solid black; padding: 5px; display: inline-block; text-align: center;">Incident Commander</div> </div> <div style="display: flex; justify-content: space-around; align-items: center;"> <div style="text-align: center;"> <div style="border: 1px solid black; padding: 5px; display: inline-block;">Command</div> <div style="border: 1px solid black; width: 20px; height: 20px; margin: 2px;"></div> <div style="border: 1px solid black; width: 20px; height: 20px; margin: 2px;"></div> <div style="border: 1px solid black; width: 20px; height: 20px; margin: 2px;"></div> <div style="border: 1px solid black; width: 20px; height: 20px; margin: 2px;"></div> </div> </div> <div style="display: flex; justify-content: space-between; margin-top: 20px;"> <div style="width: 22%; text-align: center;"> <div style="border: 1px solid black; padding: 5px; display: inline-block;">Planning</div> <div style="border: 1px solid black; width: 20px; height: 20px; margin: 2px;"></div> <div style="border: 1px solid black; width: 20px; height: 20px; margin: 2px;"></div> <div style="border: 1px solid black; width: 20px; height: 20px; margin: 2px;"></div> <div style="border: 1px solid black; width: 20px; height: 20px; margin: 2px;"></div> <div style="border: 1px solid black; width: 20px; height: 20px; margin: 2px;"></div> </div> <div style="width: 22%; text-align: center;"> <div style="border: 1px solid black; padding: 5px; display: inline-block;">Logistics</div> <div style="border: 1px solid black; width: 20px; height: 20px; margin: 2px;"></div> <div style="border: 1px solid black; width: 20px; height: 20px; margin: 2px;"></div> <div style="border: 1px solid black; width: 20px; height: 20px; margin: 2px;"></div> <div style="border: 1px solid black; width: 20px; height: 20px; margin: 2px;"></div> <div style="border: 1px solid black; width: 20px; height: 20px; margin: 2px;"></div> </div> <div style="width: 22%; text-align: center;"> <div style="border: 1px solid black; padding: 5px; display: inline-block;">Operations</div> <div style="border: 1px solid black; width: 20px; height: 20px; margin: 2px;"></div> <div style="border: 1px solid black; width: 20px; height: 20px; margin: 2px;"></div> <div style="border: 1px solid black; width: 20px; height: 20px; margin: 2px;"></div> <div style="border: 1px solid black; width: 20px; height: 20px; margin: 2px;"></div> <div style="border: 1px solid black; width: 20px; height: 20px; margin: 2px;"></div> </div> <div style="width: 22%; text-align: center;"> <div style="border: 1px solid black; padding: 5px; display: inline-block;">Finance</div> <div style="border: 1px solid black; width: 20px; height: 20px; margin: 2px;"></div> <div style="border: 1px solid black; width: 20px; height: 20px; margin: 2px;"></div> <div style="border: 1px solid black; width: 20px; height: 20px; margin: 2px;"></div> <div style="border: 1px solid black; width: 20px; height: 20px; margin: 2px;"></div> <div style="border: 1px solid black; width: 20px; height: 20px; margin: 2px;"></div> </div> </div>		
Notes:		
Prepared by:	Position:	







Form: Initial Incident Information: Meteorological Data		
Incident Name:	Date:	Time:
Meteorological Data		
State of the Weather:		
Visibility:		
Waves Height & Period:		
Stream Flow:		
Surface Current:		
Weather Forecast for Next 24 hours:		
Sea Temperature:	Air Temperature:	
Tide Movement:		
Ice Problems:		
Sunrise/Sunset:		
General Information		
Size of the Spill (Dimensions)		
Barrels spilled as of	Hours	Barrels
Remaining Barrels at Risk		
Gas Hazard/Location:	Direction of Drift:	Velocity of Drift:
Thickness of Slick/Width/Temperature:		
1,500 ft. from Source:		
3,000 ft. from Source:		
Viscosity of Spill Oil:		
Tank I.D./Source:		
Prepared by:	Position:	







Form: Initial Incident Information: Initial Site Safety and Control Analysis — Part 1			
Incident Name:	Date Prepared:	Time Prepared:	Location:
<b>To be completed by Safety Officer prior to any immediate response actions</b>			
On-Scene Commander:			
1. Wind direction across incident:	Toward your position <input type="checkbox"/>	Away from your position <input type="checkbox"/>	
2. Are people trapped or injured? <span style="float: right;"><input type="checkbox"/> Yes <input type="checkbox"/> No</span>			
3. Are people involved as unorganized observers or involved in rescue attempts? <span style="float: right;"><input type="checkbox"/> Yes <input type="checkbox"/> No</span>			
4. Are there any immediate signs of potential hazards:	a. Electrical lines down or overhead? b. Unidentified liquid or solid products visible? c. Colored vapors visible? d. Smells which are not natural noted? e. Fire, sparks nearby, sources of ignition present? f. Holes, caverns, deep ditches, fast-moving water, cliffs nearby? g. Is local traffic a potential problem? h. Signs, placards, or color codes indicating danger? i. Spill Zone	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Dry <input type="checkbox"/> Wet <input type="checkbox"/> Icy	
5. As you approach the scene from the upwind side, did you note a change in the status of any of the above? <span style="float: right;"><input type="checkbox"/> Yes <input type="checkbox"/> No</span>			
6. Have you established control of the area involved in the incident? <span style="float: right;"><input type="checkbox"/> Yes <input type="checkbox"/> No</span>			
7. Have you determined the necessity for any of the following:	a. Security? b. Hazardous material technician to identify or monitor substances involved in the incident? c. Protective gear and to what level of protection? d. Site for decontamination center? e. Site for command center? f. Safety equipment you will need to eliminate the problems? g. Placement of the warning sign? (i.e., benzene, no smoking, etc.) h. Number of personnel needed to control the situation?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Yes <input type="checkbox"/> No  <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Yes <input type="checkbox"/> No	
<b>Notes:</b>  1. Before entering a potentially hazardous work environment, <b>IT MUST BE EVALUATED BY A COMPETENT PERSON</b> to establish safe work practices, personnel protective equipment, and other control procedures. As a minimum, lower explosive limit (LEL), oxygen, and benzene concentrations must be evaluated.  2. Spill cleanup areas shall be controlled as "regulated areas." If benzene vapors are or may be expected to equal the action level of 0.5 parts per million, then the area must be posted with the following warning:  <div style="text-align: center; padding: 10px;"> <b>DANGER</b>  <b>BENZENE</b>  <b>CANCER HAZARD</b>  <b>FLAMMABLE — NO SMOKING</b>  <b>AUTHORIZED PERSONNEL ONLY</b>  <b>RESPIRATOR REQUIRED</b> </div>			

Form Information: Initial Site Safety and Control Analysis — Part 1	
Prepared by:	Safety Officer
Frequency	At Onset of Response Operations
Contents	Information Source
General Advisories	Safety Officer
Division/Group	Operations Section Chief
Chemical/Physical Hazards	Safety Officer
Precautions	Safety Officer
Approved by:	Incident/Deputy Commander
Distribution	All Recipients of Incident Action Plans

Form: Initial Incident Information: Initial Site Safety and Control Analysis -- Part 2																				
Incident Name:	Date Prepared:	Time Prepared:	Location:																	
1. Review your "Site Safety & Control Analysis" report.																				
2. Draw a map of the area. Mark the incident and present wind direction. Include at least two major landmarks and an address, if known.																				
3. ** Technician analysis of potential harmful substances on scene and exposure factor:																				
<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="padding: 5px;">Type of Substance</th> </tr> </thead> <tbody> <tr><td style="height: 20px;"></td></tr> <tr><td style="height: 20px;"></td></tr> <tr><td style="height: 20px;"></td></tr> <tr><td style="height: 20px;"></td></tr> <tr><td style="height: 20px;"></td></tr> </tbody> </table>	Type of Substance						<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="padding: 5px;">Container</th> </tr> </thead> <tbody> <tr><td style="height: 20px;"></td></tr> <tr><td style="height: 20px;"></td></tr> <tr><td style="height: 20px;"></td></tr> <tr><td style="height: 20px;"></td></tr> <tr><td style="height: 20px;"></td></tr> </tbody> </table>	Container						<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="padding: 5px;">Secure ?</th> </tr> </thead> <tbody> <tr><td style="height: 20px;"></td></tr> <tr><td style="height: 20px;"></td></tr> <tr><td style="height: 20px;"></td></tr> <tr><td style="height: 20px;"></td></tr> <tr><td style="height: 20px;"></td></tr> </tbody> </table>	Secure ?					
Type of Substance																				
Container																				
Secure ?																				
4. ** Protective gear required:																				
a. Respirator protection required? <input type="checkbox"/> Yes <input type="checkbox"/> No <div style="text-align: right; margin-top: 5px;">If yes, what type _____</div>																				
b. SCBA required? <input type="checkbox"/> Yes <input type="checkbox"/> No																				
c. Protective clothing required? <input type="checkbox"/> Yes <input type="checkbox"/> No																				
If yes, what level of protection is required and describe in detail: <div style="border-bottom: 1px solid black; height: 15px; margin-bottom: 5px;"></div> <div style="border-bottom: 1px solid black; height: 15px; margin-bottom: 5px;"></div> <div style="border-bottom: 1px solid black; height: 15px; margin-bottom: 5px;"></div> <div style="border-bottom: 1px solid black; height: 15px; margin-bottom: 5px;"></div> <div style="border-bottom: 1px solid black; height: 15px; margin-bottom: 5px;"></div> <div style="border-bottom: 1px solid black; height: 15px; margin-bottom: 5px;"></div> <div style="border-bottom: 1px solid black; height: 15px; margin-bottom: 5px;"></div> <div style="border-bottom: 1px solid black; height: 15px; margin-bottom: 5px;"></div> <div style="border-bottom: 1px solid black; height: 15px; margin-bottom: 5px;"></div> <div style="border-bottom: 1px solid black; height: 15px; margin-bottom: 5px;"></div>																				
5. Set up monitoring system, if required.																				

Form: Initial Incident Information: Initial Site Safety and Control Analysis -- Part 2					
Incident Name:	Date Prepared:	Time Prepared:	Location:		
<p>6. Is a vehicle/vessel/tank involved?    <input type="checkbox"/> Yes   <input type="checkbox"/> No</p> <p>If yes</p> <table style="width: 100%; border: none;"> <tr> <td style="width: 50%; vertical-align: top;"> <p>Driver's/Captain's Name: _____</p> <p>Equipment/Vehicle No: _____</p> <p>Railcar No: _____</p> <p>Ship Name &amp; Number: _____</p> </td> <td style="width: 50%; vertical-align: top;"> <p>Driver's/Captain's License: _____</p> <p>Tractor/Trailer No: _____</p> <p>Vessel No.: _____</p> </td> </tr> </table>				<p>Driver's/Captain's Name: _____</p> <p>Equipment/Vehicle No: _____</p> <p>Railcar No: _____</p> <p>Ship Name &amp; Number: _____</p>	<p>Driver's/Captain's License: _____</p> <p>Tractor/Trailer No: _____</p> <p>Vessel No.: _____</p>
<p>Driver's/Captain's Name: _____</p> <p>Equipment/Vehicle No: _____</p> <p>Railcar No: _____</p> <p>Ship Name &amp; Number: _____</p>	<p>Driver's/Captain's License: _____</p> <p>Tractor/Trailer No: _____</p> <p>Vessel No.: _____</p>				
<p>7. General Information:</p> <table style="width: 100%; border: none;"> <tr> <td style="width: 50%; vertical-align: top;"> <p>Carrier's Name: _____</p> <p>Manufacturer of Chemical: _____</p> <p>Point of Origin: _____</p> <p>Ship Name &amp; Number: _____</p> </td> <td style="width: 50%; vertical-align: top;"> <p>Phone number: _____</p> <p>Phone number: _____</p> <p>Destination: _____</p> </td> </tr> </table>				<p>Carrier's Name: _____</p> <p>Manufacturer of Chemical: _____</p> <p>Point of Origin: _____</p> <p>Ship Name &amp; Number: _____</p>	<p>Phone number: _____</p> <p>Phone number: _____</p> <p>Destination: _____</p>
<p>Carrier's Name: _____</p> <p>Manufacturer of Chemical: _____</p> <p>Point of Origin: _____</p> <p>Ship Name &amp; Number: _____</p>	<p>Phone number: _____</p> <p>Phone number: _____</p> <p>Destination: _____</p>				
8. Call for medical help if required. Call for police or security assistance, if required.					
9. **Determine degree of decontamination required and designate area.					
10. Set up security area and notify area residents, if applicable.					
11. Establish safe work practices, personnel protective equipment requirements, and area vapor monitoring requirements. Hold a tailgate meeting with all personnel to explain in detail communication requirements, PPE, and other site-specific requirements as necessary.					
12. Start control, containment, cleanup decontamination and disposal process.					
** To be completed by qualified technician.					

<b>Form Information: Initial Site Safety and Control Analysis — Part 2</b>	
Prepared by:	Safety Officer
Frequency	At Onset of Response Operations
<b>Contents</b>	<b>Information Source</b>
General Advisories	Safety Officer
Division/Group	Operations Section Chief
Chemical/Physical Hazards	Safety Officer
Precautions	Safety Officer
Approved by:	Incident/Deputy Commander
Distribution	All Recipients of Incident Action Plans







Form: Photo Log			
Incident Name:		Date:	Time:
Summary of Photo Documentation			
Media: Still 35mm Print Still 35mm Slide Video	Identification Number:	Original or Copy	Storage Location
Date Taken:	Weather Onsite:	Photographer:	Original or Follow-up
Time of Day:	Camera Type:		
Location:			
Subject:			
Prepared by:		Position:	
Approved by:		Position:	



### **3.0 MATERIAL SAFETY DATA SHEETS FOR NAS CORPUS CHRISTI**

The MSDSs that come under Facility Response Plan regulations for NAS Corpus Christi Facility follow this page:

- **MOGAS**
- **JP-5**
- **Fuel Oil Number 2**

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DOD Hazardous Materials Information System

DoD 6050.5-LR

AS OF October 1995

Proprietary Version - For U.S. Government Use Only

FSC: 9130

NIIN: 001487103

Manufacturer's CAGE: 3V260

Part No. Indicator: A

Part Number/Trade Name: GASOLINE, UNLEADED

General Information

Item Name: GASOLINE, AUTOMOTIVE, REGULAR, MOGAS UNLEADED

Company's Name: KOCH REFINING CO.

Company's Street: SUNTIDE RD

Company's P. O. Box: 2608

Company's City: CORPUS CHRISTI

Company's State: TX

Company's Country: US

Company's Zip Code: 78403

Company's Emerg Ph #:

Company's Info Ph #:

Distributor/Vendor # 1:

Distributor/Vendor # 1 Cage:

Distributor/Vendor # 2:

Distributor/Vendor # 2 Cage:

Distributor/Vendor # 3:

Distributor/Vendor # 3 Cage:

Distributor/Vendor # 4:

Distributor/Vendor # 4 Cage:

Safety Data Action Code:

Safety Focal Point: D

Record No. For Safety Entry: 070

Tot Safety Entries This Stk#: 117

Status: SE

Date MSDS Prepared: 01MAR88

Safety Data Review Date: 01JUN89

Supply Item Manager: KY

MSDS Preparer's Name: DALE F. JANES

Preparer's Company:

Preparer's St Or P. O. Box:

Preparer's City:

Preparer's State:

Preparer's Zip Code:

Other MSDS Number:

MSDS Serial Number: BGWPG

Specification Number: VV-G-001690

Spec Type, Grade, Class: GR REGULAR, ALL CLAS

Hazard Characteristic Code: F2

Unit Of Issue: GL

Unit Of Issue Container Qty:

Type Of Container: BULK

Net Unit Weight:

Report for NIIN: 001487103

NRC/State License Number: N/R  
Net Explosive Weight:  
Net Propellant Weight-Ammo: N/R  
Coast Guard Ammunition Code:

=====

Ingredients/Identity Information

=====

Proprietary: NO  
Ingredient: GASOLINE  
Ingredient Sequence Number: 01  
Percent: 100  
Ingredient Action Code:  
Ingredient Focal Point: D  
NIOSH (RTECS) Number: LX3300000  
CAS Number: 8006-61-9  
OSHA PEL: 300 PPM/500 STEL  
ACGIH TLV: 300 PPM/500STEL;9192  
Other Recommended Limit:

-----

Proprietary: NO  
Ingredient: BENZENE (SARA III)  
Ingredient Sequence Number: 02  
Percent: 1.5  
Ingredient Action Code:  
Ingredient Focal Point: D  
NIOSH (RTECS) Number: CY1400000  
CAS Number: 71-43-2  
OSHA PEL: 1PPM/5STEL;1910.1028  
ACGIH TLV: 10 PPM; A2; 9192  
Other Recommended Limit:

-----

Proprietary: NO  
Ingredient: PARAFFINS  
Ingredient Sequence Number: 03  
Percent: 46  
Ingredient Action Code:  
Ingredient Focal Point: D  
NIOSH (RTECS) Number: 1002590PA  
CAS Number:  
OSHA PEL: N/K  
ACGIH TLV: N/K  
Other Recommended Limit: 100 PPM

-----

Proprietary: NO  
Ingredient: OLEFINS  
Ingredient Sequence Number: 04  
Percent: 17  
Ingredient Action Code:  
Ingredient Focal Point: D  
NIOSH (RTECS) Number: 10007950L  
CAS Number:  
OSHA PEL: N/K  
ACGIH TLV: N/K

Report for NIIN: 001487103

Other Recommended Limit: 100 PPM

-----  
Proprietary: NO  
Ingredient: NAPHTHENES  
Ingredient Sequence Number: 05  
Percent: 8  
Ingredient Action Code:  
Ingredient Focal Point: D  
NIOSH (RTECS) Number: 1000794NA  
CAS Number:  
OSHA PEL: N/K  
ACGIH TLV: N/K  
Other Recommended Limit: 100 PPM  
-----

Proprietary: NO  
Ingredient: OTHER AEROMATIC HYDROCARBONS  
Ingredient Sequence Number: 06  
Percent: 27  
Ingredient Action Code:  
Ingredient Focal Point: D  
NIOSH (RTECS) Number: 1000007AH  
CAS Number:  
OSHA PEL: N/K  
ACGIH TLV: N/K  
Other Recommended Limit: 100 PPM  
=====

Physical/Chemical Characteristics

=====

Appearance And Odor: CLEAR,COLORLESS TO STRAW YELLOW LIQUID;GASOLINE ODOR  
Boiling Point: 85F  
Melting Point: N/K  
Vapor Pressure (MM Hg/70 F): N/K  
Vapor Density (Air=1): 3.5 (AIR)  
Specific Gravity: 0.72 - 0.76  
Decomposition Temperature: N/K  
Evaporation Rate And Ref: N/K  
Solubility In Water: NEGLIGIBLE  
Percent Volatiles By Volume: 100  
Viscosity:  
pH: N/K  
Radioactivity:  
Form (Radioactive Matl):  
Magnetism (Milligauss): N/P  
Corrosion Rate (IPY):  
Autoignition Temperature: >536F  
=====

Fire and Explosion Hazard Data

=====

Flash Point: -40F  
Flash Point Method: N/P  
Lower Explosive Limit: 1.3  
Upper Explosive Limit: 7.6  
Extinguishing Media: DRY CHEMICAL,CARBON DIOXIDE,FOAM,WATER FOG. WATER MAY

BE INEFFECTIVE,AS PRODUCT WILL FLOAT AND MAY SPREAD FIRE.

Special Fire Fighting Proc: WEAR SELF CONTAINED BREATHING APPARATUS IN CLOSED AREAS. WATER SPRAY MAY BE USED TO COOL FIRE EXPOSED CONTAINERS.

Unusual Fire And Expl Hazrds: VAPORS ARE HEAVIER THAN AIR,ACCUMULATING IN LOW AREAS,TRAVELING ALONG GROUND AND MAY FLASH BACK FROM DISTANT IGNITION SOURCE.

=====  
Reactivity Data  
=====

Stability: YES

Cond To Avoid (Stability): HEAT,SPARKS AND OTHER IGNITION SOURCES,VAPOR ACCUMULATIONS.

Materials To Avoid: STRONG OXIDIZERS

Hazardous Decomp Products: CARBON DIOXIDE,CARBON MONOXIDE

Hazardous Poly Occur: NO

Conditions To Avoid (Poly): N/R  
=====

Health Hazard Data  
=====

LD50-LC50 Mixture: ORAL RAT LD50 18,800 MG/KG

Route Of Entry - Inhalation: YES

Route Of Entry - Skin: NO

Route Of Entry - Ingestion: NO

Health Haz Acute And Chronic: PRODUCT IS IRRITATING TO EYES,SKIN, RESPIRATORY TRACT AND DEPRESSES THE CENTRAL NERVOUS SYSTEM. CHRONIC OVER EXPOSURE MAY CAUSE LIVER,KIDNEY, OR CENTRAL NERVOUS SYSTEM DAMAGE.

Carcinogenicity - NTP: YES

Carcinogenicity - IARC: YES

Carcinogenicity - OSHA: YES

Explanation Carcinogenicity: CONTAINS BENZENE;LISTED BY ALL THREE. ALSO, AN API STUDY FOUND LIVER CANCER IN MICE EXPOSED TO GASOLINE VAPORS.

Signs/Symptoms Of Overexp: EYE/SKIN CONTACT:TRANSITORY IRRITATION.

INHALED:RESPIRATORY IRRITATION,CENTRAL NERVOUS SYSTEM DEPRESSION INCLUDING, EUPHORIA,HEADACHE,DIZZINESS,DROWINESS,FATIGUE,TREMORS,CONVULSION,NAUSEA, VOMITING,DIARRHEA,LOSS OF CONSCIOUSNESS. AND FINALLY DEATH. INGESTED:G/I IRRITATION,PLUS SYMPTOMS SIMILAR TO THOSE UNDER "INHALED".

Med Cond Aggravated By Exp: PRE-EXISTING EYE,SKIN CONDITIONS OR IMPAIRED LIVER,KIDNEY FUNCTION MAY BE AGGRAVATED BY THIS PRODUCT.

Emergency/First Aid Proc: EYE:FLUSH WITH WATER 15 MIN. SKIN:WASH WITH SOAP & WATER. REMOVE CONTAMINATED CLOTHING;LAUNDRER BEFORE REUSE. INHALED: REMOVE TO FRESH AIR .RESUSCITATE OR GIVE OXYGEN AS NEEDED.GET MEDICAL ATTENTION. DO NOT INDUCE VOMITING. IF VOMITING OCCURS,MINIMIZE ASPIRATION HAZARD.  
=====

Precautions for Safe Handling and Use  
=====

Steps If Matl Released/Spill: ELIMINATE IGNITION SOURCES. ISOLATE AREA. USE PROTECTIVE EQUIPMENT AS NECESSARY. STOP LEAK AND CONTAIN SPILL. DIKE AS NEEDED TO KEEP SPILL FROM DRAINS, WATERS ETC. WATER FOG MAY BE USED TO REDUCE VAPORS & PERSONAL HAZARD. REPORT SPILL PER LAW.

Neutralizing Agent: NONE

Waste Disposal Method: DISPOSE I/A/W FEDERAL,STATE,LOCAL REGULATIONS.

PRODUCT QUALIFYS AS IGNITABLE WASTE AND CANNOT BE LANDFILLED. IF RECOVERY OR RECYCLE ARE UNACCEPTABLE, INCINERATION MAY BE ACCEPTABLE DISPOSAL METHOD.

Report for NIIN: 001487103

Precautions-Handling/Storing: STORE IN A COOL, DRY, ISOLATE, WELL VENTILATED AREA. KEEP IGNITION SOURCES AWAY. GROUND CONTAINERS TO PREVENT STATIC DISCHARGE DURING TRANSFERS.

Other Precautions: FIRE AND EXPLOSION ARE THE ACUTE HAZARDS OF THIS PRODUCT. TAKE EXTRAORDINARY STEPS TO PREVENT THEM.

=====  
Control Measures  
=====

Respiratory Protection: IF NEEDED, USE NIOSH/MSHA RESPIRATOR WITH ORGANIC VAPOR CARTRIDGE OR PREFERABLY, A POSITIVE PRESSURE AIR SUPPLIED RESPIRATOR OR SELF CONTAINED BREATHING APPARATUS.

Ventilation: USE EXPLOSION PROOF VENTILATION EQUIPMENT TO MAINTAIN EXPOSURE BELOW PEL/TVL

Protective Gloves: IMPERVIOUS RUBBER OR POLYMER.

Eye Protection: SAFETY GLASSES, OR SPLASH GOGGLES.

Other Protective Equipment: SAFETY SHOWER/EYE WASH. WORK CLOTHING AS NEEDED TO PROTECT FROM PROLONGED/REPEATED CONTACT.

Work Hygienic Practices: USE GOOD CHEMICAL HYGIENE PRACTICE. AVOID UNNECESSARY CONTACT. MINIMIZE ALL CONTACT.

Suppl. Safety & Health Data:

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DOD Hazardous Materials Information System

DoD 6050.5-LR

AS OF October 1995

Proprietary Version - For U.S. Government Use Only

FSC: 9130

NIIN: 002732379

Manufacturer's CAGE: 3P045

Part No. Indicator: A

Part Number/Trade Name: JP-5

General Information

Item Name: TURBINE FUEL, AVIATION

Company's Name: DIAMOND SHAMROCK REFINING AND MARKETING CO

Company's Street: 9830 COLONNADE BLVD

Company's P. O. Box: 696000

Company's City: SAN ANTONIO

Company's State: TX

Company's Country: US

Company's Zip Code: 78269-6000

Company's Emerg Ph #: 210-979-8346

Company's Info Ph #: 210-530-8680

Distributor/Vendor # 1:

Distributor/Vendor # 1 Cage:

Distributor/Vendor # 2:

Distributor/Vendor # 2 Cage:

Distributor/Vendor # 3:

Distributor/Vendor # 3 Cage:

Distributor/Vendor # 4:

Distributor/Vendor # 4 Cage:

Safety Data Action Code:

Safety Focal Point: D

Record No. For Safety Entry: 011

Tot Safety Entries This Stk#: 027

Status: SE

Date MSDS Prepared: 31DEC93

Safety Data Review Date: 26SEP94

Supply Item Manager: KY

MSDS Preparer's Name: UNKNOWN

Preparer's Company:

Preparer's St Or P. O. Box:

Preparer's City:

Preparer's State:

Preparer's Zip Code:

Other MSDS Number:

MSDS Serial Number: BGXMV

Specification Number: MIL-T-5624

Spec Type, Grade, Class: GRADE JP-5

Hazard Characteristic Code: F8

Unit Of Issue: GL

Unit Of Issue Container Qty: BULK

Type Of Container: BULK

Net Unit Weight: BULK

Report for NIIN: 002732379

NRC/State License Number: N/R  
Net Explosive Weight: N/R  
Net Propellant Weight-Ammo: N/R  
Coast Guard Ammunition Code: N/R

=====

Ingredients/Identity Information

=====

Proprietary: NO  
Ingredient: ALIPHATIC PETROLEUM SOLVENT  
Ingredient Sequence Number: 01  
Percent: >97  
Ingredient Action Code:  
Ingredient Focal Point: D  
NIOSH (RTECS) Number: OA5500000  
CAS Number: 8008-20-6  
OSHA PEL: NOT ESTABLISHED  
ACGIH TLV: NOT ESTABLISHED  
Other Recommended Limit: NONE SPECIFIED  
-----

Proprietary: NO  
Ingredient: DIETHYLENE GLYCOL MONOMETHYL ETHER  
Ingredient Sequence Number: 02  
Percent: .15-0.2  
Ingredient Action Code:  
Ingredient Focal Point: D  
NIOSH (RTECS) Number: KL6125000  
CAS Number: 111-77-3  
OSHA PEL: NOT ESTABLISHED  
ACGIH TLV: NOT ESTABLISHED  
Other Recommended Limit: NONE SPECIFIED  
-----

Proprietary: NO  
Ingredient: NAPHTHALENE (SARA III)  
Ingredient Sequence Number: 03  
Percent: <3  
Ingredient Action Code:  
Ingredient Focal Point: D  
NIOSH (RTECS) Number: QJ0525000  
CAS Number: 91-20-3  
OSHA PEL: 10 PPM/15 STEL  
ACGIH TLV: 10 PPM/15 STEL; 9192  
Other Recommended Limit: NONE SPECIFIED  
=====

Physical/Chemical Characteristics

=====

Appearance And Odor: COLORLESS LIQUID WITH AROMATIC ODOR; ODOR THRESHOLD 1 PPM.  
Boiling Point: 330-520F  
Melting Point: N/R  
Vapor Pressure (MM Hg/70 F): N/R  
Vapor Density (Air=1): N/R  
Specific Gravity: 0.80 - 0.81  
Decomposition Temperature: UNKNOWN

Report for NIIN: 002732379

Evaporation Rate And Ref: N/R  
Solubility In Water: NEGLIGIBLE  
Percent Volatiles By Volume: 100  
Viscosity: N/K  
pH: N/R  
Radioactivity: N/R  
Form (Radioactive Matl):  
Magnetism (Milligauss): N/P  
Corrosion Rate (IPY): UNKNOWN  
Autoignition Temperature: N/K

=====

#### Fire and Explosion Hazard Data

=====

Flash Point: 145F,63C  
Flash Point Method: PMCC  
Lower Explosive Limit: 1%  
Upper Explosive Limit: 5%  
Extinguishing Media: DRY CHEMICAL, FOAM, CARBON DIOXIDE.WATER SPRAY MAY BE EFFECTIVE ON BURNING PRODUCT.  
Special Fire Fighting Proc: USE A SELF-CONTAINED BREATHING APPARATUS AND FULL PROTECTIVE EQUIPMENT.  
Unusual Fire And Expl Hazrds: THIS ITEM IS COMBUSTIBLE.STATIC DISCHARGE MAY CAUSE SPONTANEOUS COMBUSTION.

=====

#### Reactivity Data

=====

Stability: YES  
Conditions To Avoid (Stability): HIGH HEAT,SOURCES OF IGNITION.  
Materials To Avoid: STRONG OXIDIZING AGENTS(EG.CHLORINE,CONCENTRATED OXYGEN,SODIUM).  
Hazardous Decomp Products: CARBON DIOXIDE,CARBON MONOXIDE  
Hazardous Poly Occur: NO  
Conditions To Avoid (Poly): N/R

=====

#### Health Hazard Data

=====

LD50-LC50 Mixture: ORAL LD50 (RAT) IS >5G/KG FOR INGRED #2  
Route Of Entry - Inhalation: YES  
Route Of Entry - Skin: YES  
Route Of Entry - Ingestion: YES  
Health Haz Acute And Chronic: EYES:MAY CAUSE IRRITATION.SKIN:MAY CAUSE IRRITATION AND DEFATTING.INGEST:MAY CAUSE GI TRACT IRRITATION.MAY CAUSE LUNG DAMAGE IF INGESTED.INHAL:MAY CAUSE RESPIRATORY IRRITATION AND CNS DEPRESSION.EYES,KIDNEYS AND BLOOD FORMING ORGANS.  
Carcinogenicity - NTP: NO  
Carcinogenicity - IARC: NO  
Carcinogenicity - OSHA: NO  
Explanation Carcinogenicity: NAPTHA MAY CAUSE SKIN TUMORS(API STUDY).EGMA MAY CAUSE REPRODUCTIVE EFFECTS.  
Signs/Symptoms Of Overexp: INHAL:ANESTHESIA,DIZZINESS,WEAKNESS, INCOORDINATION.COMBUSTION PRODUCTS MAY CAUSE NAUSEA,VOMITING,INCREASE HEARTBEAT;CARBON MONOXIDE MAY CAUSE LOSS OF CONSCIOUSNESS,HEART DAMAGE, SKIN DAMAGE.SKIN/EYES:BURNING SENSATION.INGEST:NAUSEA,VOMITING DIARRHEA;

CNS DEPRESSION IF ABSORBED.

Med Cond Aggravated By Exp: PERSONS WITH PRE-EXISTING DAMAGES TO THE EYES, KIDNEYS OR BLOOD FORMING ORGANS BE AT INCREASED RISK FROM EXPOSURE. Emergency/First Aid Proc: SKIN: REMOVE CONTAMINATED CLOTHING; WASH WITH SOAP AND WATER. EYES: FLUSH WITH WATER FOR 15 MINUTES. INHAL: REMOVE TO FRESH AIR. GIVE OXYGEN OR ARTIFICIAL RESPIRATION IF NEEDED. INGEST: DO NOT INDUCE VOMITING. GET PROMPT QUALIFIED MEDICAL ATTENTION. IF SPONTANEOUS VOMITING OCCURS, KEEP HEAD BELOW HIPS. DO NOT USE ADRENALIN.

Precautions for Safe Handling and Use

Steps If Matl Released/Spill: ELIMINATE SOURCES OF IGNITION. USE PROPER RESPIRATORY AND PROTECTIVE EQUIPMENT. SHUT OFF LEAK IF SAFE. DIKE. SOAK UP WITH A NON-COMBUSTIBLE INERT ABSORBANT (CLAY, SAND); PLACE IN PROPER CONTAINER FOR DISPOSAL. AVOID RUNOFF TO SEWER.

Neutralizing Agent: NONE

Waste Disposal Method: DISPOSE OF IN ACCORDANCE WITH FEDERAL, STATE AND LOCAL REGULATIONS. IF THE FLASHPOINT OF THE WASTE IS LESS THAN 140F, IT IS CLASSIFIED AS IGNITABLE-EPA CODE D001.

Precautions-Handling/Storing: STORE IN A COOL, DRY, WELL-VENTILATED PLACE. KEEP CONTAINER CLOSED WHEN NOT IN USE. AVOID HEAT, FLAMES AND OXIDIZERS.

Other Precautions: FOLLOW LABEL DIRECTIONS. AVOID BREATHING VAPORS. AVOID SKIN AND EYE CONTACT. GROUND CONTAINERS WHEN TRANSFERRING LIQUIDS. USE WITH ADEQUATE VENTILATION.

Control Measures

Respiratory Protection: WHERE ENVIRONMENTAL CONTROLS ARE LACKING OR IN ENCLOSED SPACES USE EITHER A SELF-CONTAINED BREATHING APPARATUS OR A NOISH/MSHA APPROVED RESPIRATOR FOR ORGANIC VAPORS, DEPENDING ON THE AIRBORN CONCENTRATION.

Ventilation: LOCAL VENTILATION AT THE WORKSITE; MECHANICAL (GENERAL) VENTILATION TO MAINTAIN TLV/PEL.

Protective Gloves: IMPERVIOUS.

Eye Protection: CHEMICAL SPLASH GOGGLES

Other Protective Equipment: PROTECTIVE CLOTHING, AS NEEDED. PROVIDE A LOCAL EYE WASH STATION AND SAFETY SHOWER.

Work Hygienic Practices: WASH HANDS. SEPERATE WORK CLOTHES FROM STREET CLOTHES. LAUNDRER WORK CLOTHES BEFORE REUSE. KEEP FOOD OUT OF THE WORK AREA.

Suppl. Safety & Health Data: NONE

DOD Hazardous Materials Information System

DoD 6050.5-LR

AS OF October 1995

Proprietary Version - For U.S. Government Use Only

FSC: 9130

NIIN: 010315816

Manufacturer's CAGE: 46684

Part No. Indicator: A

Part Number/Trade Name: JP-8 JET FUEL

General Information

Item Name: TURBINE FUEL, AVIATION

Company's Name: COASTAL CORP

Company's Street: 9 GREENWAY PLAZA

Company's P. O. Box:

Company's City: HOUSTON

Company's State: TX

Company's Country: US

Company's Zip Code: 77046

Company's Emerg Ph #: 713-877-1400

Company's Info Ph #: 713-877-1400 / FAX 713-877-6754

Distributor/Vendor # 1:

Distributor/Vendor # 1 Cage:

Distributor/Vendor # 2:

Distributor/Vendor # 2 Cage:

Distributor/Vendor # 3:

Distributor/Vendor # 3 Cage:

Distributor/Vendor # 4:

Distributor/Vendor # 4 Cage:

Safety Data Action Code:

Safety Focal Point: D

Record No. For Safety Entry: 018

Tot Safety Entries This Stk#: 025

Status: SM

Date MSDS Prepared: 24JUN93

Safety Data Review Date: 08NOV93

Supply Item Manager: KY

MSDS Preparer's Name:

Preparer's Company:

Preparer's St. Or P. O. Box:

Preparer's City:

Preparer's State:

Preparer's Zip Code:

Other MSDS Number:

MSDS Serial Number: BRZYN

Specification Number: MIL-T-83133

Spec Type, Grade, Class: GRADE JP8

Hazard Characteristic Code: F4

Unit Of Issue: GL

Unit Of Issue Container Qty: BULK

Type Of Container: BULK

Net Unit Weight: BULK

Report for NIIN: 010315816

NRC/State License Number:  
Net Explosive Weight:  
Net Propellant Weight-Ammo:  
Coast Guard Ammunition Code:

=====

Ingredients/Identity Information

=====

Proprietary: NO  
Ingredient: KEROSENE  
Ingredient Sequence Number: 01  
Percent: 100 %  
Ingredient Action Code:  
Ingredient Focal Point: D  
NIOSH (RTECS) Number: OA5500000  
CAS Number: 8008-20-6  
OSHA PEL: 100 PPM  
ACGIH TLV: 100 PPM 9091  
Other Recommended Limit: NONE RECOMMENDED

=====

Physical/Chemical Characteristics

=====

Appearance And Odor: CLEAR TO LIGHT AMBER LIQUID, MILD PETROLEUM ODOR  
Boiling Point: 401F, 205C  
Melting Point: NOT GIVEN  
Vapor Pressure (MM Hg/70 F): 1-2  
Vapor Density (Air=1): NOT GIVEN  
Specific Gravity: 0.78-0.84  
Decomposition Temperature: UNKNOWN  
Evaporation Rate And Ref: NOT GIVEN  
Solubility In Water: INSOLUBLE  
Percent Volatiles By Volume: 100 %  
Viscosity: 8 CST  
pH: N/K  
Radioactivity:  
Form (Radioactive Matl):  
Magnetism (Milligauss): N/P  
Corrosion Rate (IPY): UNKNOWN  
Autoignition Temperature: 475F

=====

Fire and Explosion Hazard Data

=====

Flash Point: 100F MIN  
Flash Point Method: N/P  
Lower Explosive Limit: NOT GIVEN  
Upper Explosive Limit: NOT GIVEN  
Extinguishing Media: DRY CHEMICAL, CARBON DIOXIDE, FOAM, WATER SPRAY.  
Special Fire Fighting Proc: USE A WATER SPRAY TO COOL FIRE-EXPOSED  
CONTAINERS. USE A SMOTHERING TECHNIQUE FOR EXTINGUISHING FIRE. DO NOT USE A  
FORCED WATER STREAM DIRECTLY; MAY SCATTER.  
Unusual Fire And Expl Hazrds: FLOWING FUEL CAN BE IGNITED BY SELF-  
GENERATED STATIC ELECTRICITY; CONTAINERS SHOULD BE GROUNDED AND BONDED.

Reactivity Data

Stability: YES

Cond To Avoid (Stability): HEAT, SPARK, FLAME, BUILD-UP OF STATIC ELECTRICITY.

Materials To Avoid: STRONG OXIDIZING AGENTS

Hazardous Decomp Products: CARBON MONOXIDE, CARBON DIOXIDE, HYDROCARBONS

Hazardous Poly Occur: NO

Conditions To Avoid (Poly): NONE. WILL NOT OCCUR.

Health Hazard Data

LD50-LC50 Mixture: NIOSH LIMIT 100 MG/M3

Route Of Entry - Inhalation: YES

Route Of Entry - Skin: YES

Route Of Entry - Ingestion: YES

Health Haz Acute And Chronic: SLIGHT TO MODERATE EYE IRRITATION; MODERATE SKIN IRRITATION; IRRITATING TO MUCOUS MEMBRANES AND RESPIRATORY TRACT; CAN BE IRRITATING TO MOUTH, THROAT, DIGESTIVE TRACT; ASPIRATION INTO LUNGS MAY CAUSE HEMORRHAGING, PULMONARY EDEMA, CHEMICAL PNEUMONITIS. CHRONIC EXPOSURE MAY CAUSE CHANGES IN FORMED ELEMENTS OF THE BLOOD.

Carcinogenicity - NTP: NO

Carcinogenicity - IARC: YES

Carcinogenicity - OSHA: NO

Explanation Carcinogenicity: IARC HAS DETERMINED SUFFICIENT EVIDENCE OF CARCINOGENICITY IN AMINALS; LIMITED EVIDENCE IN HUMANS.

Signs/Symptoms Of Overexp: EYE IRRITATION, SKIN IRRITATION/REDNESS/ DRYING, MUCOUS MEMBRANE IRRITATION, RESPIRATORY TRACT IRRITATION, HEADACHE, DIZZINESS, NAUSEA, VOMITING, LOSS OF COORDINATION, LOSS OF CONSCIOUSNESS, DIGESTIVE TRACT IRRITATION, DROWSINESS, LIVER DAMAGE, KIDNEY DAMAGE.

Med Cond Aggravated By Exp: MAY AGGRAVATE PRE-EXISTING DERMATITIS.

Emergency/First Aid Proc: EYES: IMMEDIATELY FLUSH WITH LARGE AMOUNTS OF WATER FOR 15 MINUTES. CONTACT PHYSICIAN IMMEDIATELY. SKIN: REMOVE CONTAMINATED CLOTHING AND SHOES. WASH AFFECTED AREAAS WITH SOAP AND WATER. CONATCT A PHYSICIAN IF REDDENING OR BLISTERING OCCURS. INHALATION: REMOVE TO FRESH AIR. IF BREATHING HAS STOPPED, APPLY ARTIFICIAL RESPIRATION. GET MEDICAL ATTENTION. INGESTION: DO NOT INDUCE VOMITING. GET DOCTOR.

Precautions for Safe Handling and Use

Steps If Matl Released/Spill: REMOVE SOURCES OF HEAT OR IGNITION INCLUDING INTERNAL COMBUSTION ENGINES AND POWER TOOLS. CLEAN UP SPILL, BUT DO NOT FLUSH TO SEWER OR TO SURFACE WATER. VENTILATE AREA AND AVOID BREATHING VAPORS OR MISTS.

Neutralizing Agent: NONE SPECIFIED BY MANUFACTURER.

Waste Disposal Method: PREVENT WASTE FROM CONTAMINATING SURROUNDING ENVIRONMENT. DISCARD ANY PRODUCT, RESIDUE, DISPOSAL CONTAINER OR LINER IN ACCORDANCE WITH ALL FEDERAL, STATE AND LOCAL REGULATIONS.

Precautions-Handling/Storing: STORE IN COOL, DRY AREA AWAY FROM INCOMPATIBLE WATER SOURCES OF HEAT AND IGNITION. GROUND AND BOND ALL TRANSFER AND STORAGE EQUIPMENT TO PREVENT SPARK

Other Precautions: DO NOT WELD, HEAT OR DRILL CONTAINER. EMPTIED CONTAINER

Report for NIIN: 010315816

MAY CONTAIN RESIDUE AND CAN BE DANGEROUS.

=====  
Control Measures  
=====

Respiratory Protection: USE APPROVED RESPIRATORY PROTECTION FOR CLEANING LARGE SPILLS OR ENTRY INTO LARGE TANKS, VESSELS OR OTHER CONFINED SPACES OR IN SITUATIONS WHERE AIRBORNE CONCENTRATIONS MAY EXCEED OCCUPATIONAL EXPOSURE LIMITS.

Ventilation: PROVIDE ADEQUATE GENERAL AND LOCAL EXHAUST VENTILATION.

Protective Gloves: IMPERVIOUS

Eye Protection: CHEMICAL SAFETY GLASSES, GOGGLES

Other Protective Equipment: WEAR IMPERVIOUS APRON, LONG SLEEVES, BOOTS AND FACE SHIELD WHEN HANDLING LARGE AMOUNTS OF PRODUCT.

Work Hygienic Practices: WASH WITH SOAP AND WATER AFTER HANDLING PRODUCT AND BEFORE EATING DRINKING OR SMOKING.

Suppl. Safety & Health Data: DO NOT WEAR CONTACT LENSES. MIDDLE DISTILLATES HAVE CAUSED KIDNEY DAMAGE AND SKIN CANCER IN LABORATORY ANIMALS.

DOD Hazardous Materials Information System

DoD 6050.5-LR

AS OF October 1995

Proprietary Version - For U.S. Government Use Only

FSC: 9140

NIIN: 00F008805

Manufacturer's CAGE: 58326

Part No. Indicator: A

Part Number/Trade Name: 2 FUEL OIL

General Information

Item Name: DIESEL FUEL

Company's Name: CONOCO INC.

Company's Street: N/K

Company's P. O. Box: 1267

Company's City: PONCA CITY

Company's State: OK

Company's Country:

Company's Zip Code: 74603

Company's Emerg Ph #: (800) 424-9300

Company's Info Ph #: (405) 767-6000

Distributor/Vendor # 1:

Distributor/Vendor # 1 Cage:

Distributor/Vendor # 2:

Distributor/Vendor # 2 Cage:

Distributor/Vendor # 3:

Distributor/Vendor # 3 Cage:

Distributor/Vendor # 4:

Distributor/Vendor # 4 Cage:

Safety Data Action Code:

Safety Focal Point: F

Record No. For Safety Entry: 001

Tot Safety Entries This Stk#: 001

Status:

Date MSDS Prepared: 29MAY87

Safety Data Review Date: 26JUL89

Supply Item Manager:

MSDS Preparer's Name:

Preparer's Company: CONOCO INC.

Preparer's St Or P. O. Box: N/K

Preparer's City: PONCA CITY

Preparer's State: OK

Preparer's Zip Code: 74603

Other MSDS Number:

MSDS Serial Number: BHBPH

Specification Number:

Spec Type, Grade, Class:

Hazard Characteristic Code:

Unit Of Issue:

Unit Of Issue Container Qty:

Type Of Container:

Net Unit Weight:

Report for NIIN: 00F008805

NRC/State License Number:  
Net Explosive Weight:  
Net Propellant Weight-Ammo:  
Coast Guard Ammunition Code:

=====

Ingredients/Identity Information

=====

Proprietary: NO  
Ingredient: DIESEL FUELS  
Ingredient Sequence Number: 01  
Percent: N/K  
Ingredient Action Code:  
Ingredient Focal Point: F  
NIOSH (RTECS) Number: HZ1800000  
CAS Number: 68334-30-5  
OSHA PEL: N/K  
ACGIH TLV: N/K  
Other Recommended Limit: N/K

=====

Physical/Chemical Characteristics

=====

Appearance And Odor: CLEAR OR LIGHT YELLOW LIQUID; AROMATIC ODOR.  
Boiling Point: 350-680F  
Melting Point: N/R  
Vapor Pressure (MM Hg/70 F): 1  
Vapor Density (Air=1): N/R  
Specific Gravity: 0.93  
Decomposition Temperature: N/R  
Evaporation Rate And Ref: N/R  
Solubility In Water: INSOLUBLE  
Percent Volatiles By Volume: NIL  
Viscosity:  
pH: N/R  
Radioactivity:  
Form (Radioactive Matl):  
Magnetism (Milligauss):  
Corrosion Rate (IPY): N/R  
Autoignition Temperature:

=====

Fire and Explosion Hazard Data

=====

Flash Point: 130F  
Flash Point Method: TCC  
Lower Explosive Limit: 0.4%  
Upper Explosive Limit: 6%  
Extinguishing Media: USE WATER SPRAY, DRY CHEMICAL, FOAM, CO2  
Special Fire Fighting Proc: USE WATER TO KEEP CONTAINERS COOL. IF SPILL  
HASN'T IGNITED. USE WATER SPRAY TO DISPERSE VAPORS/PROVIDE PROTECTION FOR  
PERSONNEL ATTEMPTING TO STOP A LEAK.  
Unusual Fire And Expl Hazrds: DON'T ENTER ENCLOSED OR CONFINED SPACE  
WITHOUT PROPER PROTECTIVE EQUIPMENT INCLUDING RESPIRATORY PROTECTION.

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Reactivity Data

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Stability: YES  
Cond To Avoid (Stability): HEAT, FLAME.  
Materials To Avoid: OXIDIZING MATERIALS.  
Hazardous Decomp Products: INCOMPLETE COMBUSTION MAY PRODUCE CO.  
Hazardous Poly Occur: NO  
Conditions To Avoid (Poly): N/R

=====

Health Hazard Data

=====

LD50-LC50 Mixture: N/K  
Route Of Entry - Inhalation: YES  
Route Of Entry - Skin: YES  
Route Of Entry - Ingestion: NO  
Health Haz Acute And Chronic: EYES/LUNGS/SKIN: MAY CAUSE IRRITATION.  
INGESTION: ASPIRATION INTO THE LUNGS MAY CAUSE PNEUMONIA OR CENTRAL NERVOUS  
SYSTEM DEPRESSION. INHALATION: WEAKNESS, DIZZINESS, UNCONSCIOUSNESS OR  
CONVULSIONS. PETROLEUM DISTILLATES HAVE CAUSED KIDNEY DAMAGE & KIDNEY OR  
LIVER TUMORS.  
Carcinogenicity - NTP: NO  
Carcinogenicity - IARC: NO  
Carcinogenicity - OSHA: NO  
Explanation Carcinogenicity: NONE  
Signs/Symptoms Of Overexp: EYES/LUNGS/SKIN: MAY CAUSE IRRITATION.  
INGESTION: ASPIRATION INTO THE LUNGS MAY CAUSE PNEUMONIA OR CENTRAL NERVOUS  
SYSTEM DEPRESSION. INHALATION: WEAKNESS, DIZZINESS, UNCONSCIOUSNESS OR  
CONVULSIONS. PETROLEUM DISTILLATES HAVE CAUSED KIDNEY DAMAGE & KIDNEY OR  
LIVER TUMORS.  
Med Cond Aggravated By Exp: N/K  
Emergency/First Aid Proc: INGESTION: DON'T INDUCE VOMITING. IF VOMITING  
BEGINS, LOWER VICTIM'S HEAD IN AN EFFORT TO PREVENT VOMITUS FROM ENTERING  
LUNGS. SEEK MEDICAL ATTENTION. NEVER GIVE ANYTHING BY MOUTH TO AN  
UNCONSCIOUS PERSON. EYES: FLUSH W/WATER AT LEAST 15 MIN. CALL PHYSICIAN.  
SKIN: WASH W/SOAP & WATER. INHALATION: REMOVE TO FRESH AIR.

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Precautions for Safe Handling and Use

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Steps If Matl Released/Spill: MATERIAL IS COMBUSTIBLE. CONTAIN SPILL IN  
SMALLEST AREA. RECOVER AS MUCH PRODUCT AS POSSIBLE BY VACUUMING/SOAKING UP  
RESIDUAL FLUIDS W/ABSORBENT MATERIALS. REMOVE CONTAMINATED SOIL/PLACE IN  
PROPER CONTAINERS. AVOID WASHING/DRAINING TO STORM SEWERS.  
Neutralizing Agent: N/R  
Waste Disposal Method: RECYCLE AS MUCH OF THE RECOVERABLE PRODUCT AS  
POSSIBLE. DISPOSE OF NONRECYCLABLE MATERIAL AS RCRA HAZARDOUS WASTE BY SUCH  
METHODS AS INCINERATION, COMPLYING W/FEDERAL, STATE & LOCAL REGULATIONS.  
Precautions-Handling/Storing: MINIMIZE EXPOSURE. PRODUCT CONTAINS  
HYDROCARBONS WHICH MAY CAUSE IRRITATION TO EYES, LUNGS, OR SKIN AFTER  
PROLONGED/REPEATED EXPOSURE.  
Other Precautions: PRODUCT IS CLASS II COMBUSTIBLE LIQUID PER NFPA CODE  
30-1984. STORE & HANDLE ACCORDINGLY.

=====  
Control Measures  
=====

Respiratory Protection: USE AIR MASK OR HYDROCARBON ABSORBING RESPIRATOR  
WHEN EXPOSED TO OIL SPRAY OR MISTS.

Ventilation: GENERAL MECHANICAL VENTILATION IS NORMALLY ADEQUATE.

Protective Gloves: RESISTANT

Eye Protection: FACE SHIELD

Other Protective Equipment: COVERALLS OR OTHER PROTECTIVE APPAREL NEEDED  
IF SPLASHING IS PROBABLE.

Work Hygienic Practices: LAUNDER CONTAMINATED CLOTHING BEFORE REUSE.  
CONTAMINATED LEATHER SHOES SHOULD BE DISCARDED.

Suppl. Safety & Health Data: N/R

**TAB B — NOTIFICATIONS**

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**List of Tables**

Table ERAP B.1      Emergency Notification Phone List . . . . . ERAP: TAB B-3

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## TAB B — NOTIFICATIONS

### Note

This section includes a prioritized list of emergency notifications required by regulation, along with priority for notification of response personnel. Normally, the facility fire department, Immediate Response Team (IRT), is the first call made when a spill is discovered. The IRT dispatcher then notifies the Incident Commander (IC) and appropriate facility response personnel. The IC surveys the spill site, collects the appropriate initial spill data, and notifies the U.S. Coast Guard's National Response Center (NRC) and Regional Incident Commander (RIC). The NRC call should not be delayed pending the collection of complete spill data. Next other federal, state, and local officials are called as appropriate.

The regulations require "immediate notification" to the NRC, but the term "immediate" is not defined. Generally, immediate is normally accepted by the regulators to mean "within the first 30 minutes of discovery of a spill." It would be inappropriate to call the NRC before getting the initial response teams rolling to initiate mitigation efforts and collect the initial spill data needed for the report. However, it is not appropriate to delay the report pending collection of all of the spill data required to complete the Naval Air Station (NAS) Corpus Christi spill message.

### "WHEN A SPILL IS DISCOVERED"

#### EMERGENCY NOTIFICATION PHONE LIST

**Note:** Regulations require immediate reporting of releases of oil and hazardous substances to the NRC. Do not postpone the NRC notification pending collection of all release data. NAS Corpus Christi spills exceeding reportable quantities should be reported as soon as possible, but not later than 30 minutes after a release.

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<b>Table ERAP B.1</b> <b>Emergency Notification Phone List</b>			
<b>Prioritized Contact List</b>	<b>Response Role</b>	<b>Day Phone</b>	<b>24-Hour Phone</b>
Immediate Response Team Dispatcher <b>Fire Department</b>	First Responders	See ERAP TAB E for List Ext. x3333	See ERAP TAB E for List Ext. x3333
Facility Response/Cleanup Team and Facility Management Team (See Tab E for names/phone numbers and response times)	Mitigate and clean up spills	See ERAP TAB E for List	See ERAP TAB E for List
Incident Commander Name: <b>CAPT. Richard W. Strickler, USN</b> Response Time: <b>30 minutes</b>	Incident command and control Qualified Individual	(512) 939-2332	(512) 939-2383
Deputy Incident Commander Name: <b>CDR. K. White, USN</b> Response Time: <b>30 minutes</b>	Assist with incident command and control Alternate Qualified Individual	(512) 939-3664	(512) 939-2383
<b>NATIONAL RESPONSE CENTER</b>	Receiver of all spill reports and notifier of appropriate FOSC		1-800 424-8802 (202) 267-2675
Texas Reporting: <b>NON-COASTAL</b> Point of Contact: <b>TNRCC</b>	Reporting requirement for any spill or release into the environment in non-coastal areas		(512) 463-7727
Texas Reporting: <b>COASTAL</b> Point of Contact: <b>General Land Office</b>	Reporting requirement for any spill or release into the environment in coastal area		1-800 832-8224
Regional Incident Commander Name: <b>CDR. G. Clifford, USN</b> Response Time: <b>6-12 hours</b>	Incident command and control of worst-case response Regional Qualified Individual	(504) 678-5085	(504) 678-5429
EPA Region VI Point of Contact: <b>EPA Region VI</b>	Incident reporting (follow-up) (Information is passed to EPA Region VI from NRC.	(214) 665-2222	(214) 665-2222
Oil Spill Cooperative Name: <b>Corpus Christi Area Oil Spill Control Association</b> Point of Contact: <b>Patrick Rennert</b> Response Time: <b>30 minutes</b>	Provide additional equipment and personnel Provides response expertise	(512) 882-2656	(512) 882-2656 Cellular (512) 877-8463
Adjacent Navy/DOD Facilities Point of Contact: <b>CCAD</b> Response Time: <b>30 minutes +</b>	Provide additional equipment and personnel	(512) 939-3771	(512) 939-3771

<b>Table ERAP B.1</b> <b>Emergency Notification Phone List</b>			
<b>Prioritized Contact List</b>	<b>Response Role</b>	<b>Day Phone</b>	<b>24-Hour Phone</b>
<b>Local Response Contractors</b>  Name: <b>NAVSUPSAL</b> (Naval Sea, Supervisor of Salvage)  Point of Contact: <b>Paul Hankins</b> Response Time: <b>Being Developed</b>	Provide additional equipment and personnel  Provides response expertise	<b>(703) 607-2758</b>	<b>(703) 602-7527</b>
<b>Area Committee</b>  Point of Contact: <b>USCG Marine Safety Office Corpus Christi</b>  Note: <b>USCG also FOSC for local area</b>	Incident reporting (follow-up)  (Information is passed to MSO Corpus Christi as FOSC from NRC)	<b>(512) 888-3162</b>	<b>(512) 888-3162</b>
<b>Local Emergency Planning Committee (LEPC)</b>  Point of Contact: <b>David Parrot</b>	Incident reporting	<b>(512) 880-3701</b>	
<b>Local (city/county) Response Team, Fire Department, Hazardous Material (HazMat) Team</b>  Point of Contact: <b>NAS Corpus Christi</b> Response Time: varies	Emergency medical  HazMat response support  Fire suppression support	<b>(512) 939-3333</b>	<b>(512) 939-3333</b>
<b>FEMA</b>  Point of Contact: <b>FEMA</b>	Incident reporting (follow-up)	<b>(202) 274-8105</b>	
<b>Natural Resource Trustee: Federal</b>  Point of Contact: <b>National Park Service</b>	Natural Resource Trustee	<b>(404) 331-4916</b>	<b>(404) 331-6343</b>
<b>Natural Resource Trustee: Federal</b>  Point of Contact: <b>U.S. Fish &amp; Wildlife Service</b>	Natural Resource Trustee	<b>(404) 331-6343</b>	<b>(404) 331-6343</b>
<b>Natural Resource Trustee: Federal</b>  Point of Contact: <b>Secretary of Defense</b>	Natural Resource Trustee: Military lands	<b>(404) 362-7498</b>	<b>(404) 362-7498</b>
<b>Natural Resource Trustee: Federal</b>  Point of Contact: <b>US Department of Commerce: National Oceanic and Atmospheric Administration (NOAA)</b>	Natural Resource Trustee	<b>(301) 443-8567</b>	<b>(301) 443-8567</b>

<b>Table ERAP B.1</b> <b>Emergency Notification Phone List</b>			
<b>Prioritized Contact List</b>	<b>Response Role</b>	<b>Day Phone</b>	<b>24-Hour Phone</b>
Natural Resource Trustee: State  Point of Contact: <b>Texas Natural Resource Conservation Commission: General Land Office</b>	Natural Resource Trustee	(512) 463-5001	1-800 832-8224
Local Response Contractors  Point of Contact: <b>Garrett Construction</b> Response Time: <b>1-2 hrs</b>	Provide salvage capabilities	(512) 643-7575	(512) 643-7575
Local Response Contractors  Point of Contact: <b>G&amp;H Towing</b> Response Time: <b>2-4 hrs</b>	Provide tugs	(512) 884-8791	(512) 884-8791
Local Response Contractors  Point of Contact: <b>Hollywood Marine</b> Response Time: <b>2-3 hrs</b>	Provide tugs	(512) 883-6387	(512) 883-6387
Environmental Interest Group  Point of Contact: <b>National Audubon Society</b>	Contact for representatives of various private users of the bay	(512) 886-5968	(512) 886-5968
Environmental Interest Group  Point of Contact: <b>Earth Save of Corpus Christi</b>	Contact for representatives of various private users of the bay	(512) 991-5156	(512) 991-5156
Environmental Interest Group  Point of Contact: <b>Gulf Coast Conservation Association</b>	Contact for environmental assessment support	(512) 882-5199	(512) 882-5199

<b>Table ERAP B.1</b> <b>Emergency Notification Phone List</b>			
<b>Prioritized Contact List</b>	<b>Response Role</b>	<b>Day Phone</b>	<b>24-Hour Phone</b>
Local (city/county) Response Team, Fire Department, HazMat Team  Point of Contact: <b>Corpus Christi</b> Response Time:	Emergency medical  HazMat response support  Fire suppression support	<b>911</b> <b>(512) 880-3900</b>	<b>911</b> <b>(512) 880-3900</b>
Local (city/county) Response Team, Fire Department, HazMat Team  Point of Contact: <b>Refinery Terminal Fire Dept.</b> Response Time: <b>30 minutes</b>	Emergency medical  HazMat response support  Fire suppression support	<b>(512) 822-6253</b>	<b>(512) 822-6253</b>
State Emergency Response Commission (SERC)  Point of Contact:	Incident reporting		
County Environmental Agencies  Point of Contact: <b>Nueces County Beach Services</b>	Incident reporting	<b>(512) 949-7023</b>	<b>(512) 949-7023</b>
County Environmental Agencies  Point of Contact: <b>City of Corpus Christi Health Department</b>	Incident reporting	<b>(512) 851-7273</b>	<b>(512) 851-7273</b>
State Police  Point of Contact: <b>Texas Highway Patrol</b>	Traffic control  Evacuation  Crowd control	<b>911</b> <b>(512) 854-2681</b>	<b>911</b> <b>(512) 854-2681</b>
Sheriff Department  Point of Contact: <b>Nueces County</b>	Traffic control  Evacuation  Crowd control  Aircraft helicopter, police boat	<b>911</b> <b>(512) 886-2600</b>	<b>911</b> <b>(512) 886-2600</b>
Local Water Supply System Manager  Point of Contact: <b>NONE AT RISK</b> Response Time:	Secure water supply intakes	<b>NONE AT RISK</b>	<b>NONE AT RISK</b>
Local TV  Point of Contact: <b>KIII TV-13</b>	Broadcast evacuation notices	<b>(512) 854-4733</b>	<b>(512) 854-4733</b>

<b>Table ERAP B.1</b> <b>Emergency Notification Phone List</b>			
<b>Prioritized Contact List</b>	<b>Response Role</b>	<b>Day Phone</b>	<b>24-Hour Phone</b>
Local TV Point of Contact: <b>KORO</b>	Broadcast evacuation notices (Spanish)	(512) 576-5288	(512) 576-5288
Local TV Point of Contact: <b>KZTV TV-10</b>	Broadcast evacuation notices	(512) 883-7070	(512) 883-7070
Local TV Point of Contact: <b>KRIS TV-6</b>	Broadcast evacuation notices	(512) 886-6100	(512) 886-6100
Local Radio Point of Contact: <b>KSIX</b>	Broadcast evacuation notices	(512) 883-7070	(512) 883-7070
Local Radio Point of Contact: <b>KCTA</b>	Broadcast evacuation notices	(512) 289-0999	(512) 289-0999
Local Radio Point of Contact: <b>KLTG &amp; KDAE</b>	Broadcast evacuation notices	(512) 882-4394	(512) 882-4394
Local Radio Point of Contact: <b>KSAB FM</b>	Broadcast evacuation notices	(512) 851-1414	(512) 851-1414
Local Radio Point of Contact: <b>KNCN FM C-101</b>	Broadcast evacuation notices	(512) 560-5101	(512) 560-5101
Local Radio Point of Contact: <b>KUNO AM</b>	Broadcast evacuation notices	(512) 851-1414	(512) 851-1414
Hospital(s) Point of Contact: <b>Drs. Regional Medical</b>  <b>Note:</b> Some Hospitals may not be set up for in house decontamination. Ensure field Decon prior to transport.	Medical support	(512) 857-1400	(512) 857-1400
Hospital(s) Point of Contact: <b>Memorial Medical Center</b>  <b>Note:</b> Some Hospitals may not be set up for in house decontamination. Ensure field Decon prior to transport.	Medical support	(512) 881-4000	(512) 881-4000

Table ERAP B.1 Emergency Notification Phone List			
Prioritized Contact List	Response Role	Day Phone	24-Hour Phone
Hospital(s)  Point of Contact: <b>Naval Hospital</b>  <b>Note:</b> Some Hospitals may not be set up for in house decontamination. Ensure field De-con prior to transport.	Medical support	(512) 939-2685	(512) 939-2685
Hospital(s)  Point of Contact: <b>Southside Community</b>  <b>Note:</b> Some Hospitals may not be set up for in house decontamination. Ensure field De-con prior to transport.	Medical support	(512) 854-2031	(512) 854-2031
Hospital(s)  Point of Contact: <b>Riverside Memorial Hospital</b>  <b>Note:</b> Some Hospitals may not be set up for in house decontamination. Ensure field De-con prior to transport.	Medical support	(512) 526-2321	(512) 526-2321
Hospital(s)  Point of Contact: <b>Spohn Hospital</b>  <b>Note:</b> Some Hospitals may not be set up for in house decontamination. Ensure field De-con prior to transport.	Medical support	(512) 884-2041	(512) 884-2041
Local Weather  Point of Contact: <b>Department of Commerce National Weather Service</b>	Weather forecasts	(817) 334-2652 (512) 289-0604	(817) 334-2652 (512) 289-0604
Technical Support: Harbor Master  Point of Contact: <b>Port of Corpus Christi</b>	Ship and barge movement	(512) 882-2080	(512) 882-2080
Technical Support: Director of Operations  Point of Contact: <b>Port of Corpus Christi Authority</b>	Ship and barge movement	(512) 882-5633	(512) 882-5633
Technical Support  Point of Contact: <b>Texas Natural Resource Conservation Commission (TNRCC)</b>	Laboratory support	(512) 939-8484	
Technical Support  Point of Contact: <b>Core Labs</b>	Laboratory support	(512) 289-2673	(512) 289-2673

<b>Table ERAP B.1</b> <b>Emergency Notification Phone List</b>			
<b>Prioritized Contact List</b>	<b>Response Role</b>	<b>Day Phone</b>	<b>24-Hour Phone</b>
Technical Support  Point of Contact: <b>Analysis, Inc.</b>	Laboratory support	(512) 444-5896	(512) 444-5896
Technical Support  Point of Contact: <b>TX Park and Wildlife Department: Mr. Frank Dickerson</b>	Wildlife Rehabilitation	(512) 289-5566	(512) 289-5566
Technical Support  Point of Contact: <b>USCG National Strike Force Coordination Center</b> Response time: <b>6-12 hours</b>	Coordination of the USCG Strike Teams's response equipment	(919) 331-6000	(919) 331-6000

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**TAB C — NOTIFICATION FORM**

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**TAB C — NOTIFICATION FORM**

**Spill Response Notification Form  
National Response Center 1-800-424-8802**

**Note:** It is not necessary to wait for all information before calling the NRC.

**THIS FORM IS TO BE USED FOR INITIAL NOTIFICATION AND ALL FOLLOW-UP NOTIFICATIONS.  
ACTION SHOULD BE ASSIGNED BY THE QUALIFIED INDIVIDUAL (QI)  
FOR INITIAL AND FOLLOW-UP COMPLETION.**

<b>Table ERAP C.1 Spill Response Notification Form</b>	
<b>Reporter Information</b>	
Reporter's Name  Last First	
Reporter's Phone Number	(XXX) XXX-XXXX
Company	
Organization Type	
Position	
Address	Street:
	City:
	State:
	ZIP Code:
Were Materials Released	<input type="checkbox"/> YES <input type="checkbox"/> NO
Confidential	<input type="checkbox"/> YES <input type="checkbox"/> NO
Time Call Received	(use 24-hour time)

Table ERAP C.1 Spill Response Notification Form	
Incident Description	
Source and/or Cause of Incident	
Date	
Time of Incident	(use 24-hour time)
Incident Address/Location	
Nearest City	
County	
State	
Zip Code	
Distance from City (miles)	
Section	
Township	
Range	
Container Type	
Tank Capacity (include units)	
Facility Capacity (include units)	
Facility Latitude	___ Degrees ___ Minutes ___ Seconds
Facility Longitude	___ Degrees ___ Minutes ___ Seconds
Weather Conditions	
Material Released	Chemical Hazards Response Information System (CHRIS) Code —
<input type="checkbox"/> YES	Quantity Released — (include units)
<input type="checkbox"/> NO	Material Released into Water — <input type="checkbox"/> YES <input type="checkbox"/> NO
	Quantity Released into Water — (include units)

Table ERAP C.1 Spill Response Notification Form	
Response Actions	
Actions Taken to Correct Incident	
Actions Taken to Control Incident	
Actions Taken to Mitigate Incident	

Table ERAP C.1 Spill Response Notification Form	
<b>Impact</b>	
Number of Injuries	
Number of Deaths	
Evacuation(s) Required	<input type="checkbox"/> YES <input type="checkbox"/> NO
Number Evacuated	
Was There Any Damage	<input type="checkbox"/> YES <input type="checkbox"/> NO
Damage in Dollars (estimated)	
Medium Affected	
Description of Effect	
Additional Information about Medium	
Additional Information  Any information about the incident not recorded elsewhere in the report	
<b>Caller Notifications</b>	
EPA	<input type="checkbox"/> YES <input type="checkbox"/> NO
USCG	<input type="checkbox"/> YES <input type="checkbox"/> NO
SERC	<input type="checkbox"/> YES <input type="checkbox"/> NO
LEPC	<input type="checkbox"/> YES <input type="checkbox"/> NO
RIC	<input type="checkbox"/> YES <input type="checkbox"/> NO
Other (List)	<input type="checkbox"/> YES <input type="checkbox"/> NO
Other (List)	<input type="checkbox"/> YES <input type="checkbox"/> NO
Other (List)	<input type="checkbox"/> YES <input type="checkbox"/> NO
Other (List)	<input type="checkbox"/> YES <input type="checkbox"/> NO

## **TAB D — EMERGENCY RESPONSE ACTION PLANS**

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## **TAB D — EMERGENCY RESPONSE ACTION PLANS**

### **1.0 EMERGENCY RESPONSE ACTION PLANS**

#### **Note**

**This section contains prioritized emergency response actions to ensure the safety of facility personnel, quickly stop the spill source, and prevent or mitigate the spread of spilled product to limit environmental and property damage. Responsibilities of response personnel during the emergency phase of the response are listed. The response procedures have been tailored to match NAS Corpus Christi's oil and hazardous substance (OHS) inventory, spill risk, sensitivity, and available resources.**

**The Emergency Response Action Plan (ERAP) section was divided into three parts: a generic OHS response section, one section for an U.S. Environmental Protection Agency (USEPA) non-transportation related (NTR) facility and one for hazardous substance spills. Although it is possible to combine all of the response actions into one section, the resulting complexity of the instruction would defeat the purpose of an Immediate Action Plan.**

**Rather than list Generic OHS response procedures in this section, they are outlined in Annex 1 and will generally fit most cases, especially those where there are no trained response personnel onsite. However, the regulatory-specific sections to address the requirements for immediate response to an EPA NTR spill, and a final section to address hazardous substance spill response are outlined.**

Since it is difficult to enumerate all the steps that must be taken at each location on NAS Corpus Christi, the ERAP sections are divided into parts: a generic OHS response section, and an EPA NRT facility section. These ERAPs are presented in the below tables:

#### **ERAP Tables**

##### **Generic Emergency Response Action Plan**

- D.1** Generic Response Procedures for Spiller/Discoverer Actions
- D.2** Generic Response Procedures for Incident Commander
- D.3** Generic Response Procedures for Facility Response Team
- D.4** Generic Response Procedures for Facility Spill Management Team
- D.5** Generic Response Procedures for Other Facility Response Personnel

##### **Emergency Response Action Plan: EPA Non-Transportation-Related Facility**

- D.6** Immediate Actions for Bulk Fuel Storage Tank Failure Including Associated Tank Equipment with Dike Basins.
- D.7** Immediate Actions for In-Plant Piping Equipment Failures in Areas Outside of Bulk Storage Dike Basins.
- D.8** Immediate Actions for Pump Station Equipment Failures such as Pumps, Relief Valves, Flow Control Valves, Etc.
- D.9** Immediate Actions for Spills at the Tank Truck Loading Facility.
- D.10** Emergency Actions in Fires and Explosions.

## 1.1 Generic Emergency Response Action Plan

### Emergency Response Action Plan

#### Generic OHS Spill Response Procedures

Table ERAP D.1 Generic Response Procedures for Spiller/discoverer Actions	
Condition	Actions
Unless properly trained and authorized, do not try to combat any spill. Sound alarm, report the spill, and stand by until the response team arrives.	<ul style="list-style-type: none"><li>• If imminent danger to life or property, or if fire threatens or starts, activate nearest fire alarm and evacuate upwind/upgrade to a safe distance. Call Fire Department.</li><li>• Rescue any injured persons, if safe to do so.</li><li>• Report spill immediately to IC/Fire Department</li><li>• Pass the word to people in adjacent spaces.</li><li>• Stop source of spill or leak if possible and if safe to do so.</li><li>• Restrict all ignition sources if flammable vapors present or expected.</li><li>• If properly trained and authorized, initiate available onsite measures to minimize the spread of contaminants. Otherwise, stand by until emergency response personnel arrive on scene. Provide known details of spill when assistance arrives.</li></ul>

**Table ERAP D.2**  
**Generic Response Procedures for Facility Incident Commander**

Condition	Actions
<p>Actions after spill report received.</p> <p>Initial actions at spill site</p> <p>The fire chief, or senior fire official, will assume the duties of the IC and take control of the spill until the IC arrives onsite. Some response actions will be performed concurrently.</p>	<ul style="list-style-type: none"> <li>• Activate IRT and provide known spill details and location of spill site.</li> <li>• Quickly assess spill site and consult with fire chief and other onsite IRT personnel to determine the need for additional resources or containment measures. <ul style="list-style-type: none"> <li>— Rescue any injured individuals if rescue can be performed safely.</li> <li>— Secure the spill area to prevent unauthorized entry.</li> <li>— Stop the spill source, if not already accomplished.</li> <li>— Take whatever measures necessary and possible to prevent the spill from spreading: Mat storm drains; sandbag or otherwise block drainage ditches or other pathways leading to water courses or sensitive environmental areas; deploy sorbent boom; construct diversion channels; etc. See Drainage Map in FRP Tab 18 for location of shutoffs and other drainage controls.</li> <li>— Quickly determine the need to evacuate all or part of the facility/nearby community and implement the evacuation procedures outlined in Tab I as necessary.</li> <li>— Restrict all sources of ignition if flammable vapors are present or suspected.</li> </ul> </li> <li>• Ensure that tests for combustible gases and type of oil are made.</li> <li>• Ensure that the source of spill has or is being stopped where possible.</li> <li>• Ensure that proper containment and mitigation measures are being employed.</li> <li>• Activate facility response/cleanup team as needed. Notification List - Tab B.</li> <li>• Activate facility spill management team as needed. Notification List - Tab B.</li> </ul>

**Table ERAP D.2**  
**Generic Response Procedures for Facility Incident Commander**

Condition	Actions
<p>Actions after spill report received.</p> <p>Initial actions at spill site</p> <p>The fire chief, or senior fire official, will assume the duties of the IC and take control of the spill until the IC arrives onsite. Some response actions will be performed concurrently.</p>	<ul style="list-style-type: none"> <li>• If spill has escaped, or is threatening to escape onsite containment measures, ensure that appropriate resources are available and ready to be deployed in accordance with the priority for protection of sensitive areas established in Tab G.</li> <li>• Ensure the National Response Center is notified.</li> <li>• Notify outside response resources, if needed.</li> <li>• Establish command/communication center as spill size or conditions warrant.</li> <li>• Depending on the size and anticipated impact of the spill and resources needed, utilize appropriate checklists (ERAP Annex 2) to ensure that: <ul style="list-style-type: none"> <li>— Documentation of the response effort is maintained.</li> <li>— Regulatory agencies are notified.</li> <li>— Pollution reports are filed.</li> <li>— Command center is established as required.</li> <li>— Communication system is established.</li> <li>— Security is in place.</li> <li>— Public affairs team is onsite and coordinating the external communication flow.</li> <li>— Staging areas for outside resources are cleared and are available.</li> <li>— Funding sources and amounts are identified and are available.</li> <li>— Technical assistance is available.</li> <li>— Containment for removed oil and contaminated debris is available.</li> <li>— Disposal operations are under way.</li> <li>— Permits for disposal/incinerations, etc. are applied for.</li> <li>— Medical/health/safety personnel are onsite or are available for support.</li> <li>— Aircraft support is available.</li> <li>— Legal support is available.</li> <li>— Weather reports are available.</li> <li>— Wildlife hazing/rehabilitation resources are available.</li> <li>— Coordination with regulatory officials is being maintained.</li> </ul> </li> </ul>

<b>Table ERAP D.3</b> <b>Generic Response Procedures for Facility Response Team</b>	
<b>Condition</b>	<b>Actions</b>
Actions after spill report received.	<ul style="list-style-type: none"> <li>• Report to spill site, Command Center, or other location as directed by the IC for work assignment by the IC or Section Chiefs (SCs). If the IC or SCs have not arrived onsite, report to the Fire Chief or Senior Fire Official.</li> <li>• Perform duties as assigned safely and efficiently.</li> <li>• Ensure that all collected oil or contaminated debris is properly stored, pending disposal, to prevent further contamination.</li> <li>• Maintain communication chain as directed by the IC or Operations Chief.</li> </ul>

<b>Table ERAP D.4</b> <b>Generic Response Procedures for Facility Spill Management Team</b>	
<b>Condition</b>	<b>Actions</b>
Actions after spill report received.	<ul style="list-style-type: none"> <li>• Report to spill site, Command Center, or other location as directed by the IC for briefing and work assignment.</li> <li>• Perform duties as assigned so that information and guidance provided to the IC is clear, concise, and contributes to the overall objectives established for the response.</li> </ul>

<b>Table ERAP D.5</b> <b>Generic Response Procedures for Other Facility Response Personnel</b>	
<b>Condition</b>	<b>Actions</b>
Actions after spill report received.	<ul style="list-style-type: none"> <li>• Report to spill site, Command Center, or other location as directed by the IC.</li> <li>• Perform duties as assigned so that information and guidance provided to the IC is clear, concise, and contributes to the overall objectives established for the response.</li> </ul>

## 1.2 EPA NTR Facility Emergency Response Action Plan

### Emergency Response Action Plan

#### EPA NTR Facility Response Procedures

**Note:** This section contains oil spill response procedures that apply to NAS Corpus Christi's NTR petroleum facilities.

NTR Facility Tiered Discharge Planning Volumes		
Type of Oil	Discharge Planning Tier	Discharge Volume (Gals)
I	Small Discharge	2,100
	Medium Discharge	36,000
	Worst-case Discharge	864,658

**Note:** See Table FRP Appendix C.5, Appendix C, for the basis and computation of the tiered discharge planning volumes.

## Immediate Action Plan

<b>Table ERAP D.6</b> <b>Immediate Actions for Bulk Fuel Storage Tank Failure, Including Associated Tank Equipment within Dike Basins</b> <b>(Tanks 13-1, 13-2 and 1720-1 &amp; 1720-2)</b>		
<b>Condition</b>	<b>Actions</b>	<b>Job Title</b>
<ul style="list-style-type: none"> <li>• Tank Failure during Transfers</li> <li>• Spill Does Not Breach Dikes</li> </ul>	<ul style="list-style-type: none"> <li>• Shut down vessel pump (if offloading vessel) or facility pump (if loading vessel or transferring to another tank or tank truck).</li> <li>• Verify closure of containment drainage valve and verify spill containment within the secondary containment system</li> <li>• Secure all sources of ignition and spill area.</li> <li>• If possible and safe to accomplish, close tank's flow control valves.</li> <li>• Slowly close other valves in the transfer circuit to prevent other potential equipment failures.</li> <li>• Pump a layer of water into dike basin to prevent spill from seeping into the ground.</li> <li>• Depending on the extent and location of the failure, consider pumping oil from the damaged tank to other tanks to reduce spill magnitude and draw down the oil level below the failure point to stop discharge.</li> <li>• Notify the Fire Department and the IC with required information.</li> </ul>	Operator on duty
<ul style="list-style-type: none"> <li>• Tank Failure under Static Conditions</li> <li>• Spill Does Not Breach Dikes</li> </ul>	<ul style="list-style-type: none"> <li>• Verify closure of containment drainage valve and verify spill containment within the secondary containment system.</li> <li>• Secure all sources of ignition and spill area.</li> <li>• Verify closure of nearest flow control/block valves and verify that the tank is isolated from all other fuel equipment.</li> <li>• Pump a layer of water into dike basin to prevent spill from seeping into the ground.</li> <li>• Depending on the extent and location of the failure, consider pumping oil from the damaged tank to other tanks to reduce spill magnitude and draw down the oil level below the failure point to stop discharge.</li> <li>• Notify the Fire Department and the IC with required information.</li> </ul>	Operator on duty

**Table ERAP D.6**  
**Immediate Actions for Bulk Fuel Storage Tank Failure, Including Associated Tank Equipment within Dike Basins**  
**(Tanks 13-1, 13-2 and 1720-1 & 1720-2)**

Condition	Actions	Job Title
<ul style="list-style-type: none"> <li>Tank Failure</li> <li>Spill Breach Dikes</li> </ul>	<ul style="list-style-type: none"> <li>Secure all sources of ignition and spill area.</li> <li>Stop pumping operation as described above.</li> <li>Close/verify closure of nearest flow control/block valves and verify that the tank is isolated from all other fuel equipment.</li> <li>Verify closure of containment drainage valve.</li> <li>Boom or block the storm drainage ditches and storm drains.</li> <li>Move earth to repair dike or stem spill escaping dike basin.</li> <li>Pump a layer of water into dike basin to prevent spill from seeping into the ground.</li> <li>Depending on the extent and location of the failure, consider pumping oil from the damaged tank to other tanks to reduce spill magnitude and draw down the oil level below the failure point to stop discharge.</li> <li>Notify the Fire Department and the IC with required information.</li> </ul>	Operator on duty
Piping Failure	<ul style="list-style-type: none"> <li>Shut down facility pump (if transferring to another tank or tank truck loading racks).</li> <li>Verify closure of containment drainage valve and spill containment within the dike basin system.</li> <li>Secure all sources of ignition and spill area.</li> <li>Slowly close the tank flow control valve and other valves in the transfer circuit (to include dock valves and the valves at the pier manifold if spill occurs during a vessel transfer operation).</li> <li>Use available containers to collect spill from piping if feasible.</li> <li>Recover/contain spill on the basin ground with sorbent pads.</li> <li>When feasible, use saddle clamps to stem or control leak.</li> <li>Notify the Fire Department and IC with required information.</li> </ul>	Operator on duty

**Table ERAP D.6**  
**Immediate Actions for Bulk Fuel Storage Tank Failure, Including Associated Tank Equipment within Dike Basins**  
**(Tanks 13-1, 13-2 and 1720-1 & 1720-2)**

Condition	Actions	Job Title
Flow Control Valve, Flange, Fitting and Other Associated Tank and Piping Equipment Failure	<ul style="list-style-type: none"> <li>• Stop leak where possible (e.g., by tightening bolts, closing all valves).</li> <li>• If spill occurs during a transfer operation, shut off pumps and then slowly close nearest block or flow control valves to isolate affected equipment.</li> <li>• If spill occurs during static conditions, verify closure of nearest flow control/block valves and isolation of affected equipment.</li> <li>• Secure all sources of ignition and spill area.</li> <li>• Verify closure of containment drainage valve.</li> <li>• If effective, use drip pans or other containment equipment to contain and collect the spill.</li> <li>• Contain and recover spill on ground with sorbent pads or soil.</li> <li>• Notify the Fire Department and the IC with required information.</li> </ul>	Operator on duty

<p align="center"><b>Table ERAP D.7</b>  <b>Immediate Actions for In-plant Piping Equipment Failures in Areas Outside of Bulk Storage Dike Basins</b></p>		
<b>Condition</b>	<b>Actions</b>	<b>Job Title</b>
Piping Failure during Transfers	<ul style="list-style-type: none"> <li>• Shut down facility pump (if transferring to another tank or tank truck).</li> <li>• If spill from ruptured piping is into a containment system, verify closure of containment drainage valve and spill containment within the secondary containment system; if piping at the pump station or tank truck and railcar loading racks fails, verify that the valve controlling the flow to the oil/water separator is closed and open the valve to divert spill from containment to the holding tank.</li> <li>• If failure occurs at a piping location outside containment, boom or block the drainage so can not enter the drainage ditches and cover all storm drains.</li> <li>• Secure all sources of ignition and spill area.</li> <li>• Slowly close nearest flow control/block valves to isolate the ruptured section of piping and close other valves in the transfer circuit (to include dock valves and the valves at the pier manifold if spill occurs during a vessel transfer operation) to prevent other potential equipment failures caused by the tank failure.</li> <li>• Use available containers to collect spill from piping, if feasible.</li> <li>• Contain spill outside of containment with sorbent pads.</li> <li>• When feasible, use saddle clamps to stem or control leak.</li> <li>• Notify the Fire Department and IC with required information.</li> </ul>	Operator on duty
Relief Valve Failure during Transfers	<ul style="list-style-type: none"> <li>• Shut down facility pump if transferring to tank truck.</li> <li>• Slowly close nearest block or flow control valves to isolate failed relief valve, <u>after shutting off pump.</u></li> <li>• Secure all sources of ignition and spill area.</li> <li>• Use available containers to collect spill, if feasible.</li> <li>• Contain spill with sorbent pads or soil and block surrounding drainage ditches to prevent spill migration.</li> <li>• When necessary and feasible, use a portable pump to reduce affected pipe section pressure to atmospheric pressure.</li> <li>• Notify the Fire Department and the IC with required information.</li> </ul>	Operator on duty

<p align="center"><b>Table ERAP D.7</b>  <b>Immediate Actions for In-plant Piping Equipment Failures in Areas Outside of Bulk Storage Dike Basins</b></p>		
<b>Condition</b>	<b>Actions</b>	<b>Job Title</b>
Relief Valve Failure during Static Conditions	<ul style="list-style-type: none"> <li>Secure all sources of ignition and spill area.</li> <li>Verify closure of nearest flow control/block valves and isolation of leaking valve.</li> <li>Use available containers to collect spill if feasible.</li> <li>Contain spill with sorbent pads or soil and block off surrounding drainage ditches.</li> <li>Where necessary and feasible, use a portable pump to reduce affected pipe section pressure to atmospheric pressure.</li> <li>Notify the Fire Department and the IC with required information.</li> </ul>	Operator on duty
Flow Control Valves, Drain Valves, Flanges, Fittings and Other Equipment Failure	<ul style="list-style-type: none"> <li>Stop leak where possible (e.g., by tightening bolts).</li> <li>If spill occurs during a transfer operation, shut off pumps and then slowly close nearest block or flow control valves to isolate affected equipment.</li> <li>If spill occurs during static conditions, verify closure of nearest flow control/block valves and isolation of affected equipment.</li> <li>Secure all sources of ignition and spill area.</li> <li>If effective, use drip pans or other containment equipment to contain and collect the spill.</li> <li>Contain spill with sorbent pads or soil and block surrounding drainage ditches to prevent spill from reaching the north and west tidal drainage ditches.</li> <li>Notify the Fire Department and the IC with required information.</li> </ul>	Operator on duty

<p align="center"><b>Table ERAP D.8</b>  <b>Immediate Actions for Pump Station Equipment Failures Such as Pumps, Relief Valves, Flow Control Valves, Etc.</b></p>		
<b>Condition</b>	<b>Actions</b>	<b>Job Title</b>
Pump Failure	<ul style="list-style-type: none"> <li>Shut down pump (vessel pumps if offloading to vessel or facility pumps if loading vessel or transferring to tank truck loading racks).</li> <li>Slowly close aligned valves, <u>after shutting off pump</u>, to stop transfer operation.</li> <li>Secure ignition sources and spill area.</li> <li>Slowly close flow control/block valves to isolate pumping equipment.</li> <li>Verify spill containment in the pump station's curbed catchment; verify that the valve in the catchment's flow diversion box controlling the flow to the oil/water separator is closed.</li> <li>Contain any spill escaping outside of curbed catchment with sorbent pads.</li> <li>Drain spill in the catchment to holding tank.</li> <li>Notify the Fire Department and the IC with required information.</li> </ul>	Operator on duty
Pumping Equipment Leaks	<ul style="list-style-type: none"> <li>Shut down pump.</li> <li>If unable to stop leak with available means (e.g. by taking up packing nuts for a packing leak), switch to backup pump.</li> <li>If unable to bypass affected equipment, shut down pumping operation.</li> <li>Slowly close working storage and receiving tanks flow control valves, <u>after shutting off pump</u>, to stop transfer operation.</li> <li>Close flow control/block valves to isolate leaking pumping equipment; verify that the valve controlling flow from the curbed catchment to the oil/water separator is closed.</li> <li>If effective, use drip pans or other containers to collect spill.</li> <li>Drain spill in catchment to holding tank or use sorbents to contain and collect the spill in the curbed catchment.</li> <li>Contain any spill escaping the curbed containment with sorbent pads.</li> <li>Notify the Fire Department and the IC with required information.</li> </ul>	Operator on duty

<b>Table ERAP D.8</b> <b>Immediate Actions for Pump Station Equipment Failures Such as Pumps, Relief Valves, Flow Control Valves, Etc.</b>		
<b>Condition</b>	<b>Actions</b>	<b>Job Title</b>
Relief Valve Failure during Transfers	<ul style="list-style-type: none"> <li>• Shut down pump (vessel pump if offloading vessel or facility pump if loading vessel or transferring to tank truck load rack).</li> <li>• Slowly close nearest block or flow control valves to isolate failed relief valve, <u>after shutting off pump.</u></li> <li>• Secure all ignition sources and spill area.</li> <li>• Verify spill containment in the pump station's curbed catchment; verify that the valve in the catchment's flow diversion box controlling the flow to the oil/water separator is closed.</li> <li>• Use available containers to collect spill if feasible.</li> <li>• Drain spill in catchment to holding tank or use sorbents to contain and collect the spill in the curbed catchment.</li> <li>• Contain spill escaping outside of curbed containment with sorbent pads.</li> <li>• Where necessary and feasible, use a portable pump and tank to reduce affected pipe section pressure to atmospheric pressure.</li> <li>• Notify the Fire Department and the IC with required information.</li> </ul>	Operator on duty
Relief Valve Failure during Static Conditions	<ul style="list-style-type: none"> <li>• Secure all ignition sources and spill area.</li> <li>• Verify closure of nearest flow control/block valves and isolation of leaking valve; verify that the valve in the catchment's flow diversion box controlling the flow to the oil/water separator is closed.</li> <li>• If feasible, use a portable pump and the 600-gal trailer to reduce affected pipe section pressure to atmospheric pressure.</li> <li>• Drain spill in catchment to holding tank or use sorbents to contain and collect the spill in the curbed catchment.</li> <li>• Contain spill escaping outside of curbed containment with sorbent pads.</li> <li>• Notify the Fire Department and the IC with required information.</li> </ul>	Operator on duty

<p align="center"><b>Table ERAP D.8</b>  <b>Immediate Actions for Pump Station Equipment Failures Such as Pumps, Relief Valves, Flow Control Valves, Etc.</b></p>		
<b>Condition</b>	<b>Actions</b>	<b>Job Title</b>
Flow Control Valves, Drain Valves, Flanges, Fittings and Other Equipment Failure	<ul style="list-style-type: none"> <li>• Stop leak where possible (e.g., by tightening bolts).</li> <li>• If spill occurs during a transfer operation, shut off pumps and then slowly close nearest block or flow control valves to isolate affected equipment.</li> <li>• If spill occurs during static conditions, verify closure of nearest flow control/block valves and isolation of affected equipment; verify that the valve in the catchment's flow diversion box controlling the flow to the oil/water separator is closed.</li> <li>• Secure all ignition sources and spill area.</li> <li>• If effective, use drip pans or other containment equipment to contain and collect the spill.</li> <li>• Drain spill in catchment to holding tank or use sorbents to contain and collect the spill in the curbed catchment.</li> <li>• Contain spill outside of curbed containment with sorbent pads.</li> <li>• Notify the Fire Department and the IC with required information.</li> </ul>	Operator on duty

<b>Table ERAP D.9</b> <b>Immediate Actions for Spills at the Tank Truck Loading Facility</b>		
<b>Condition</b>	<b>Actions</b>	<b>Job Title</b>
Tank Truck Overfill	<ul style="list-style-type: none"> <li>• Shut off pump</li> <li>• Close valve to stop fuel flow into truck, <u>after shutting off pump.</u></li> <li>• Secure all ignition sources and the spill area.</li> <li>• Verify that the valve for controlling curbed catchment discharge to the sump is open for drainage.</li> <li>• DO NOT START truck until the spill has been removed.</li> <li>• Contain and recover any spill in catchment with sorbent pads.</li> <li>• Contain spill escaping the curbed catchment with sorbent pads.</li> <li>• Block all storm water drains north of curbed catchment area.</li> <li>• Notify the Fire Department and the IC with required information.</li> </ul>	Operator on duty
Tank Truck Equipment Failure/Storage Compartment Rupture	<ul style="list-style-type: none"> <li>• Shut off pump.</li> <li>• Close valve to stop fuel flow into truck, <u>after shutting off pump.</u></li> <li>• Secure all ignition sources and the spill area.</li> <li>• Verify that the valve for controlling curbed catchment discharge to the sump area is open for drainage.</li> <li>• If size of spill may exceed the capacity of the holding area, prepare to pump excess oil from the holding area or into Reclaim system if necessary. (<u>Ensure that the containment discharge valve is closed.</u>)</li> <li>• DO NOT START truck until the spill has been removed.</li> <li>• Contain and recover any spill in catchment with sorbent pads.</li> <li>• Contain spill escaping the curbed catchment with sorbent pads.</li> <li>• Block or divert any spill escaping the curbed catchment, e.g., by using a trench, sorbent pads, soil berms, plywood, etc., to prevent spill from flowing away.</li> <li>• Notify the Fire Department and the IC with required information.</li> </ul>	Operator on duty

<p align="center"><b>Table ERAP D.9</b>  <b>Immediate Actions for Spills at the Tank Truck Loading Facility</b></p>		
<b>Condition</b>	<b>Actions</b>	<b>Job Title</b>
Flow Control Valves, Drain Valves, Flanges, Fittings, Transfer Hose and Other Equipment Leaks and Failure	<ul style="list-style-type: none"> <li>• Shut off pump during transfer operation.</li> <li>• Close valve to stop fuel flow into truck, <u>after shutting off pump</u>, during transfer operation.</li> <li>• Secure all ignition sources and the spill area.</li> <li>• Verify that the valve for controlling curbed catchment discharge to the oil/water reclaim system is closed; open drainage valve controlling flow to the sump to discharge spill to reclaim system.</li> <li>• Close flow control valve at the servicing bulk storage tank.</li> <li>• DO NOT START truck until the spill has been removed.</li> <li>• Contain and recover any spill in catchment with sorbent pads.</li> <li>• Contain spill escaping the curbed catchment with sorbent pads.</li> <li>• Block storm water drains located just north of the curbed catchment area.</li> <li>• Notify the Fire Department and the IC with required information.</li> </ul>	Operator on duty

**Table ERAP D.10**  
**Emergency Actions in Fires and Explosions**

Condition	Actions	Job Title
<ul style="list-style-type: none"> <li>Tanks</li> <li>Automatic Fire Protection System (FPS) Foam System is Functional</li> </ul>	<ul style="list-style-type: none"> <li>Notify Fire Department and IC.</li> <li>Verify that there is a fire, smoke, or imminent danger of a fire or explosion.</li> <li>Rescue any injured or incapacitated personnel.</li> <li>If incident occurs during a transfer operation, stop pumping equipment and close block or flow control valves in transfer circuit.</li> <li>Verify that dike drainage valve is closed.</li> <li>Fight fire as trained and established by NAS Operating, Maintenance and Emergency Manual and standard operating procedures.</li> <li>Secure area, stay upwind, and keep out of low areas.</li> <li>Remove or secure other sources of ignition <u>if possible and safe</u> to accomplish.</li> </ul>	Operator on duty
<ul style="list-style-type: none"> <li>Tanks</li> <li>Automatic FPS Foam System Is Not Functioning</li> </ul>	<ul style="list-style-type: none"> <li>Notify Fire Department and IC.</li> <li>Verify that there is a fire, smoke, or imminent danger of a fire or explosion.</li> <li>Rescue any injured or incapacitated personnel.</li> <li>Use fire hydrants near tank(s) (see FRP Tab 18 figures). Use booster pump if pressure drops.</li> <li>If incident occurs during a transfer operation, stop pumping equipment and close block or flow control valves in transfer circuit.</li> <li>Verify that dike drainage valve is closed.</li> <li>Fight fire as trained and established by NAS Operating, Maintenance, and Emergency Manual and standard operating procedures.</li> <li>Secure area, stay upwind and keep out of low areas.</li> <li>Remove or secure other sources of ignition <u>if possible and safe</u> to accomplish.</li> </ul>	Operator on duty

**Table ERAP D.10**  
**Emergency Actions in Fires and Explosions**

Condition	Actions	Job Title
Other Bulk Storage Tank Sites and In-plant Pipelines and Equipment	<ul style="list-style-type: none"> <li>• Notify Fire Department and IC.</li> <li>• Verify that there is a fire, smoke, or imminent danger of a fire or explosion.</li> <li>• Rescue any injured or incapacitated personnel.</li> <li>• If incident occurs during a transfer operation, stop pumping equipment and close block or flow control valves in transfer circuit.</li> <li>• If incident involves a tank or associated equipment within a dike basin, verify that dike drainage valve is closed.</li> <li>• Fight fire as trained and established by NAS Operating, Maintenance, and Emergency Manual and standard operating procedures.</li> <li>• Secure area, stay upwind and keep out of low areas.</li> <li>• Remove or secure other sources of ignition <u>if possible and safe</u> to accomplish.</li> </ul>	Operator on duty
<ul style="list-style-type: none"> <li>• Tank Truck Load Rack</li> <li>• Fire Detection and Automatic Fire Suppression System Is Functional</li> </ul>	<ul style="list-style-type: none"> <li>• Notify Fire Department and IC upon alarm activation.</li> <li>• Verify that there is a fire, smoke, or imminent danger of a fire or explosion.</li> </ul> <p><b>Note:</b> Foam fire suppression system will automatically activate.</p> <ul style="list-style-type: none"> <li>• Rescue any injured or incapacitated personnel.</li> <li>• If incident occurs during a transfer operation, stop pumping equipment, and close block or flow control valves in transfer circuit</li> <li>• Verify that the flow control valves in the diversion box are closed.</li> <li>• Fight fire as trained and established by NAVSTA Operating, Maintenance, and Emergency Manual and standard operating procedures.</li> <li>• Secure area, stay upwind, and keep out of low areas.</li> <li>• Remove or secure other sources of ignition <u>if possible and safe</u> to accomplish.</li> </ul>	Operator on duty

**Table ERAP D.10**  
**Emergency Actions in Fires and Explosions**

Condition	Actions	Job Title
<ul style="list-style-type: none"> <li>Tank Truck Load Rack</li> <li>Automatic Fire Suppression System Is Not Functioning</li> </ul>	<ul style="list-style-type: none"> <li>Notify Fire Department and IC upon alarm activation.</li> <li>Verify that there is a fire, smoke, or imminent danger of a fire or explosion.</li> <li>Rescue any injured or incapacitated personnel.</li> <li>If incident occurs during a transfer operation, stop pumping equipment and close block or flow control valves in transfer circuit.</li> <li>Verify that the flow control valves in the diversion box are closed.</li> <li>Fight fire as trained and established by NAVSTA Operating, Maintenance, and Emergency Manual and standard operating procedures.</li> <li>Secure area, stay upwind, and keep out of low areas.</li> <li>Remove or secure other sources of ignition <u>if possible and safe</u> to accomplish.</li> </ul>	Operator on duty
Pump Station	<ul style="list-style-type: none"> <li>Notify Fire Department and IC upon alarm activation.</li> <li>Verify that there is a fire, smoke, or imminent danger of a fire or explosion.</li> <li>Rescue any injured or incapacitated personnel.</li> <li>Shut off electrical power to station.</li> <li>If incident occurs during a transfer operation, stop pumping equipment and close block or flow control valves in transfer circuit.</li> <li>Verify that the flow control valves in the diversion box are closed.</li> <li>Fight fire as trained and established by NAVSTA Operating, Maintenance, and Emergency Manual and standard operating procedures.</li> <li>Secure area, stay upwind, and keep out of low areas.</li> <li>Remove or secure other sources of ignition <u>if possible and safe</u> to accomplish.</li> </ul>	Operator on duty

## **TAB E — RESPONSE PERSONNEL: FACILITY RESPONSE TEAM**

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## **TAB E — RESPONSE PERSONNEL: FACILITY RESPONSE TEAM**

### **1.0 RESPONSE PERSONNEL: FACILITY RESPONSE TEAM**

#### **1.1 Qualified Individual Authority and Responsibility**

This section addresses the QI's authority and major responsibilities. As a minimum, the QI and designated alternate must have:

- Authority to activate and contract with Oil Spill Removal Organizations (OSROs);
- Authority to act as liaison with the FOSC; and
- Authority to obligate funds required to carry out all necessary or directed oil response activities.

See ERAP Table E.1 and FRP TAB 2, Section 2.6 for a more in-depth list of QI responsibilities.

**Note:** Under the OPA 90 EPA regulations, responsibilities of the Emergency Coordinator include those of the QI and the IC. Under Navy policy, the same individual performs these functions.

#### **1.2 Alternate Qualified Individual Authority and Responsibility**

The Alternate Qualified Individual's (AQI's) duties are identical to that of the Primary QI. The AQI will assume command and control in the QI's absence. See ERAP Table E.1 and FRP TAB 2, Section 2.6 for a full list of the AQI's responsibilities and duties.

#### **1.3 Response Personnel Resources**

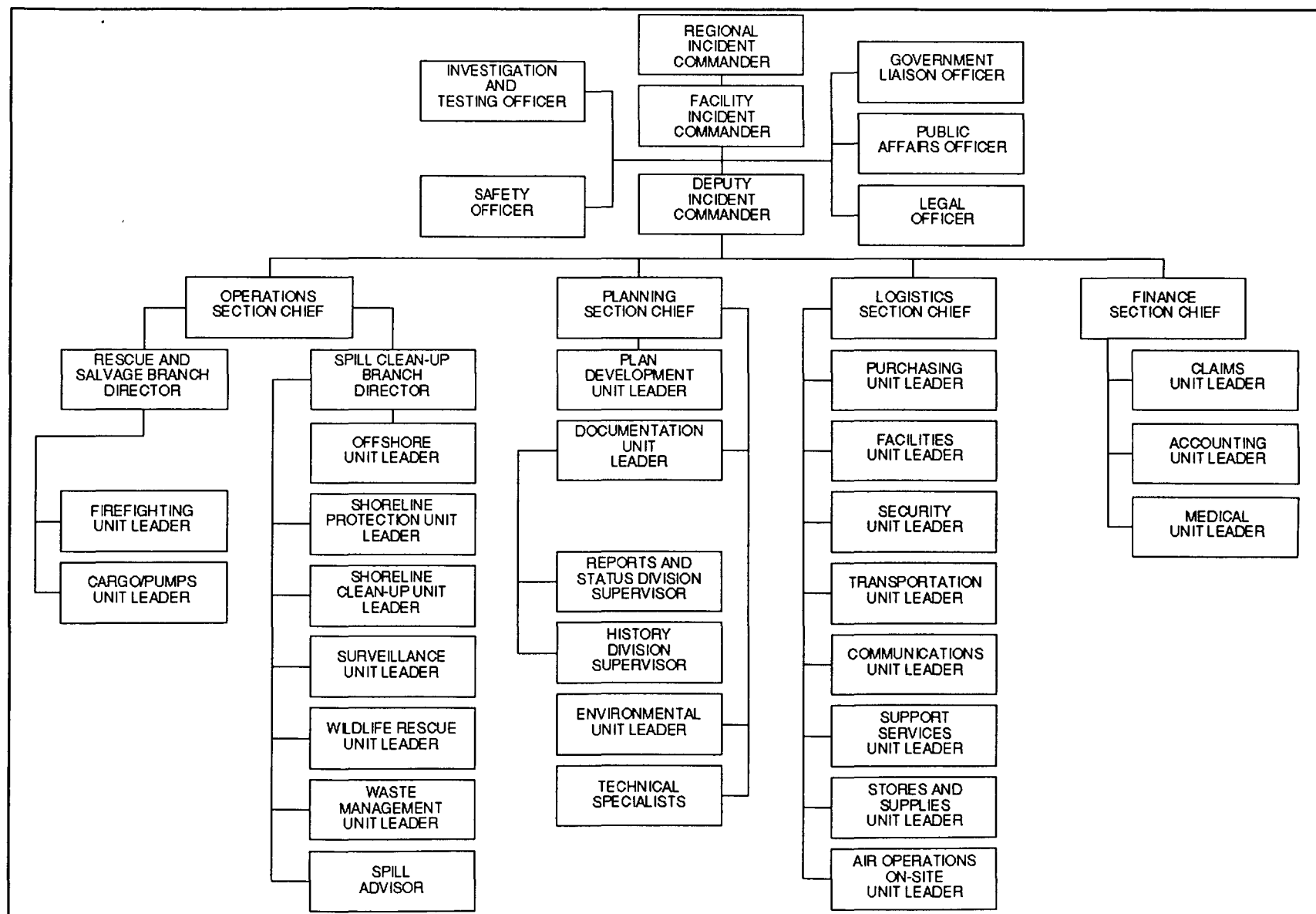
##### **1.3.1 Response Organization**

###### **Outline Note:**

This section displays the facility's response structure developed to respond effectively to a spill volume up to the maximum most probable. The RIC plan will address the response procedures and resources to combat the worst-case spill discharge. Facilities without available resources to meet the maximum most probable spill requirements should define the limits of their in-house capabilities. The RIC plan will address resources to make up any deficiencies. However, the established equipment tier times must be met, even if additional resources must be purchased or contracted for by the facility.

As required by OPA 90, DoD will use the Incident Command System (ICS) to facilitate coordination with contractor, public, and regulatory personnel during a spill. The following section provides a sample ICS organizational structure that may be used as a guide or indication of the level of preparedness regulators expect.

The RIC is listed at the head of the facility's response organization since the Incident Commander is under the RIC's direct control relative to spill response and a note should be added to any diagram indicating that the RIC's resources and staff are depicted separately in the RIC plan.



**Table ERAP E.1  
Incident Command System**

Incident Command System Position	Duties/Responsibilities
Incident Commander (IC/Qualified Individual/ Facility Emergency Coordinator)	Manage overall response operations.
	Obtain initial incident briefing from the Initial Response Team Leader.
	Determine the nature of the incident; assess the threat posed by the incident to human health and the environment, and the appropriate level of response.
	Activate notification system to activate spill response management team.
	Ensure that personnel safety is accorded the highest priority throughout the entire response; assess the interaction of the spill substance with water and/or other substances stored at the facility and notify the response personnel at the scene of the safety assessment.
	Develop strategic objectives and response priorities to guide response operations. [These objectives must be forwarded to the planning section for inclusion in Incident Action Plans]
	Approve/authorize the implementation of Incident Action Plans.
	Serve as the primary contact with the RIC and federal and state On-Scene Coordinators.
	Attend "Unified Command" meetings with the federal and state On-Scene Coordinators.
	Review and approve resource allocations requested by the section chiefs.
	Monitor and evaluate the effectiveness of response operations and make adjustments to response strategies as necessary.
	Serve as the primary spokesperson with the news media
	Review/approve news releases and statements.
	Approve requests for outside resources.
	Approve demobilization plan.
	Ensure that response actions are documented.

**Table ERAP E.1  
Incident Command System**

<b>Incident Command System Position</b>	<b>Duties/Responsibilities</b>
Deputy Incident Commander (DIC/Alternate Qualified Individual/Alternate Emergency Coordinator)	Obtain an initial briefing from the FIC and attend daily planning/briefing meetings.
	Coordinate the preparation of the initial incident briefing form.
	Conduct planning meeting and coordinate with the Planning Section Chief.
	Provide information on manpower, equipment, and materials for Command Staff operations to the Logistics Section Chief.
	Assist the IC in developing strategic objectives and response priorities.
	Coordinate the activities of the section chiefs to ensure the Incident Action Plan is implemented efficiently, safely, and effectively.
	Coordinate with the Safety Officer to ensure the safety of response personnel.
	Provide the IC with regular briefings on the status of response operations.
	Ensure that each Section Chief documents the section's actions and that this documentation is forwarded to the Documentation Unit Leader.
	Coordinate with the Public Affairs and Government Liaison Officers to ensure that a steady, accurate flow of information is maintained.
	Coordinate rescue, salvage, and cleanup operations.
	Resolve conflicts that may arise during response operations.
	Serve as the secondary point-of-contact for the ICS Response Organization.
	Conduct periodic surveys of the response.
	Document all actions.
Investigation and Testing Officer	Obtain initial briefing from the IC and attend daily planning/briefing meetings.
	Provide AIC with manpower, equipment, and material needs
	Brief Investigation and Testing staff on Incident Action Plans <ul style="list-style-type: none"> <li>• Verify that staff have most current plan</li> <li>• Make/verify daily assignments</li> <li>• Establish/review reporting requirements</li> </ul>
	Coordinate with IC, Legal Officer, and Historian to develop and implement a plan for the internal investigation of the incident and to evaluate the incident response.
	Participate in any regulatory agency spill investigation and/or response evaluation.
	Coordinate investigation activities with the Documentation Unit Leader and ensure that all records are secured.
	Coordinate with the Medical Unit Leader to develop/implement an alcohol/drug testing program.
	Document actions.

**Table ERAP E.1  
Incident Command System**

Incident Command System Position	Duties/Responsibilities
Safety Officer	Obtain initial briefing from the IC and attend daily planning/briefing meetings.
	Provide AIC with information on manpower, equipment, and material needs.
	Provide Planning Section Chief with safety information for Incident Action Plans <ul style="list-style-type: none"> <li>• Description of safety hazards/risks</li> <li>• Measures to avoid/mitigate safety hazards/risks</li> </ul>
	Develop/issue safety bulletins and guidelines during the response.
	Brief safety staff on the contents of Incident Action Plans. <ul style="list-style-type: none"> <li>• Verify that staff have most current plan.</li> <li>• Make/verify assignment.</li> <li>• Establish/review reporting requirements.</li> </ul>
	Ensure that all volunteer response personnel have received the required federal and state safety-related training.
	(Maintain these records onsite)
	Ensure compliance with relevant OSHA regulations.
	Serve as liaison with federal and state OSHA representatives.
	Assess the need for assistance from local fire, police, and emergency rescue units.
	Evaluate the need for an evacuation of response personnel/nearby residents.
	Coordinate the evaluation of field operations with Operations Section Chief to ensure that appropriate safety guidelines are developed.
	Coordinate personal protective equipment needs with Stores and Supplies Unit Leader.
	Ensure that decontamination facilities are established, functional, and used during field operations.
	Establish a system to recognize and eliminate safety hazards during response operations.
	Exercise emergency authority to prevent/stop unsafe operations.
	Investigate, report, record, and recommend corrective actions for all safety-related accidents that occur during response operations.
	Notify appropriate federal, state, and local government agencies of all safety-related incidents.
	Coordinate with Medical Unit Leader to identify locations for first-aid stations and enforce industrial hygiene standards.
	Document actions.

**Table ERAP E.1  
Incident Command System**

Incident Command System Position	Duties/Responsibilities
Government Liaison Officer	Obtain initial briefing from IC and attend daily planning/briefing meetings.
	Provide AIC with manpower, equipment, and material needs.
	Brief Government Liaison staff on contents of Incident Action Plans. <ul style="list-style-type: none"><li>• Verify that staff have most current plan.</li><li>• Make/verify assignments.</li><li>• Establish/review reporting requirement.</li></ul>
	Make contact with federal, state, and local government representatives for those threatened and/or affected areas; provide information on the incident/response status.
	Coordinate with the Public Affairs Officer; ensure that steady, accurate flow of information is maintained to federal, state, and local government representatives.
	Provide Public Affairs Officer with the contact list and telephone numbers for all government agencies.
	Arrange regular briefings/tours for federal, state, and local government representatives.
	Assist/represent (as directed) the IC at meeting with Federal, State, and local government representatives.
	Relay information from government representatives to the IC and section chiefs.
	Assist the Planning Chief in obtaining government agency approvals/permits required for response operations.
	Maintain a record/log of contacts with government representatives.
	Document all actions.

**Table ERAP E.1  
Incident Command System**

Incident Command System Position	Duties/Responsibilities
Public Affairs Officer	Obtain initial briefing from IC and attend daily planning/briefing meetings.
	Provide DFIC with manpower, equipment, and material needs.
	Brief Public Affairs staff on contents of Incident Action Plans. <ul style="list-style-type: none"> <li>• Verify that staff have most current plan.</li> <li>• Make/verify assignments.</li> <li>• Establish/review reporting requirement.</li> </ul>
	Serve as the principal adviser to the FIC on all matters relating to external communications.
	Advise the IC about the public and community relations impact(s) of the response operations.
	Coordinate with the IC and the Legal Officer to establish incident-specific public relations guidelines and distribute to all response team members.
	Establish lines of communications with local press, radio, and TV; national/international media representatives; concerned citizens' groups; and other public organizations.
	Coordinate with the Operations Section Chief and the Reports and Status Division Supervisor to ensure access to complete, accurate, and up-to-date information on the nature and status of response operations.
	Monitor media coverage of the response and provide follow-up information when necessary.
	Be available to answer on-the-spot media inquiries.
	Prepare public statements, press releases, and fact sheet for the IC's approval.
	Arrange news conferences, media briefings, interviews, press tours, etc. for reporters, community groups/leaders, and others as directed by the IC.
	Establish a media or news room.
	Maintain a record of newspaper articles, radio and television broadcasts, press conferences, and press briefings.
	Document actions.

**Table ERAP E.1  
Incident Command System**

Incident Command System Position	Duties/Responsibilities
Legal Officer	Obtain initial briefing from IC and attend daily planning/briefing meetings.
	Provide AIC with manpower, equipment and material needs.
	Brief legal staff on contents of Incident Action Plans.
	<ul style="list-style-type: none"> <li>• Verify that staff have most current plan.</li> <li>• Make/verify assignments.</li> <li>• Establish/review reporting requirement.</li> </ul>
	Review policies, practices, and procedures related to response operations.
	Identify and address legal issues that may arise from or are associated with response operations.
	Advise IC and Operations Section Chief on legal matters related to the response.
	Advise IC and section chiefs on the type of documentation that must be compiled and retained to support incident related litigation and/or claims.
	As directed by the IC, review news releases and/or statements prior to their issuance.
	As directed by the IC, review contracts issued by Purchasing Unit before their execution.
	Provide advice and assistance to the Claims Unit Leader for the handling of damage assessments and handling of claims.
	Provide Operations Section and Planning Section Chiefs with legal counsel concerning response operations particularly in operations that require regulatory agency approvals and/or permits.
	Ensure that guidelines are established concerning/limiting communications related to liability or fault.
	Supervise the activities of outside legal counsel.
	Document actions.

**Table ERAP E.1  
Incident Command System**

Incident Command System Position	Duties/Responsibilities
Operations Section Chief	Obtain initial briefing from IC and attend daily planning/briefing meetings.
	Conduct briefings with Operations Section personnel.
	Provide information on manpower, equipment, and material needs to Logistics Section Chief.
	<p>Conduct tactical operations planning meetings and supervise the development and distribution of tactical operations plans.</p> <ul style="list-style-type: none"> <li>• Review strategic objectives and response priorities.</li> <li>• Obtain summary of current response actions.</li> <li>• Obtain summary of resource utilization.</li> <li>• Devise response strategies.</li> <li>• Make duty assignments.</li> <li>• Prepare/post Operations Section organization chart.</li> </ul>
	<p>Brief Operations Section personnel on contents of Incident Action Plans.</p> <ul style="list-style-type: none"> <li>• Verify that section personnel have most current plan.</li> <li>• Identify Field Supervisors.</li> <li>• Make/verify field assignments.</li> <li>• Establish/review reporting requirements.</li> </ul>
	Ensure section personnel comply with the Site-specific Health and Safety (H&S) plan.
	Ensure section personnel have the equipment and materials to carry out response operations safely, efficiently, and effectively.
	Ensure that personnel are aware of and follow all policies and directives.
	Ensure that the concerns of regulatory agencies and impacted communities are adequately addressed when formulating and executing response strategies.
	Inform section personnel of changing weather conditions.
	Provide regular briefings to the IC about the nature and status of rescue, salvage, and spill cleanup operations.
	Provide Reports and Status Division Supervisor and Public Affairs Officer with accurate, up-to-date information on the nature and status of rescue, salvage, and cleanup operations.
	Coordinate response operations with other response resources (e.g., oil spill cooperatives, OSROs, specialized service companies, and government agencies).
	Initiate recommended releases/reassignment of equipment and/or personnel when resources are no longer needed.
	Document actions.

**Table ERAP E.1  
Incident Command System**

Incident Command System Position	Duties/Responsibilities
Rescue and Salvage Branch Director	Obtain initial briefing from Operations Section Chief and attend daily planning/briefing meetings.
	Provide Operations Section Chief with information on manpower, equipment, and material needs for the branch.
	Obtain weather forecasts from the Operations Section Chief.
	Develop and implement rescue operations, as needed, and coordinate operations with Coast Guard and/or other available resources capable of providing search and rescue services.
	Direct the planning for and conduct engineering and technical activities associated with salvage operations.
	Identify and retain salvage contractors.
	Provide regular briefings to Operations Section Chief on the nature and status of the branch's response operations.
	Ensure that all personnel comply with the site-specific H&S plan.
	Serve as liaison with the on-scene Coast Guard personnel involved in rescue operations.
	Provide Public Affairs Officer and Reports and Status Division Supervisor with accurate, up-to-date information on the nature and status of the rescue and salvage operations.
	Document actions.
Firefighting Unit Leader	Obtain initial briefing from the Rescue and Salvage Branch Director and attend daily planning/briefing meetings.
	Coordinate with IC, Operations Section Chief, Safety Officer, and Rescue and Salvage Branch to determine the need for evacuations.
	Assess the type and magnitude of existing conditions and/or characteristics to determine the most appropriate action(s) to be taken.
	<p>The following should be considered:</p> <ul style="list-style-type: none"> <li>• Securing electrical power sources and other ignition sources</li> <li>• Activating warning alarms</li> <li>• Evacuating surrounding areas</li> </ul>
	Develop a plan for extinguishing/containing any fire.
	Provide Logistics Section Chief with information on manpower, equipment, and material needs for extinguishing/containing fire or controlling explosion hazards.
	Supervise extinguishing/containing fire and provide regular briefings on the status of fire suppression operations to the Rescue and Salvage Branch Director.
	Coordinate activities with Cargo/Pumps Unit Leader and Spill Cleanup Branch Director to ensure that fire containment operations and other response operations do not interfere with each other.
	Document actions.

**Table ERAP E.1  
Incident Command System**

Incident Command System Position	Duties/Responsibilities
Cargo/Pumps Unit Leader	Obtain briefing from Rescue and Salvage Branch Director and attend daily briefing meetings.
	Provide Rescue and Salvage Branch Director with information on the manpower, equipment, and material needs for the unit.
	Coordinate with Technical Services to conduct the engineering and technical analyses of transfer and/or lightering operations.
	Obtain weather forecasts from Rescue and Salvage Branch Director.
	Supervise the cargo transfer, pumping, and/or lightering activities to ensure that they are conducted in a safe and efficient manner.
	Provide Rescue and Salvage Branch Director with periodic updates on the status of cargo transfer, pumping, and/or lightering activities.
	Document actions.
Spill Cleanup Branch Director	Obtain initial briefing from Operations Section Chief and attend daily tactical operations planning/briefing meetings.
	Provide Operations Section Chief with information for the tactical operations portion of the Incident Action Plans.
	Provide Operations Section Chief with information on manpower, equipment, and material needs for branch.
	<ul style="list-style-type: none"> <li>• Make branch/group assignments.</li> <li>• Assign area(s) of operation.</li> <li>• Deploy response resources (equipment/personnel) to each operations area.</li> </ul>
	Assign Spill Cleanup Branch personnel, as necessary.
	Ensure that all personnel comply with the site-specific H&S plan.
	Ensure that personnel are aware of and follow all policies and directives.
	Obtain up-to-date surveillance information.
	Provide regular briefings to the Operations Section Chief and daily updates to the Reports and Status Division Supervisor on the status of response operations.
	Coordinate response activities with Rescue and Salvage Branch Director.
	Obtain current weather forecasts from Operations Section Chief.
	Provide Operations Section Chief with information on the quantity and types of liquid, solid debris, and/or hazardous wastes generated during response operations.
	Provide Operations Section Chief with information on all special incidents and/or accidents.
	Document actions.

**Table ERAP E.1  
Incident Command System**

Incident Command System Position	Duties/Responsibilities
Offshore Unit Leader	Obtain initial briefing from the Spill Cleanup Branch Director and attend daily tactical operations planning meetings and briefing meetings.
	Provide Spill Cleanup Branch Director with information on manpower, equipment, and material needs for unit operations.
	Supply Spill Cleanup Branch Director with information for the Situation Status Report and the offshore response operations section of the tactical operations portion of Incident Action Plans: <ul style="list-style-type: none"> <li>• Summary of current actions.</li> <li>• Identification of areas of operations.</li> <li>• Identification of response technique(s) to be employed.</li> <li>• Summary of equipment and resources currently being used.</li> <li>• List of response equipment to be deployed in each area of operation.</li> </ul>
	Obtain weather forecasts from Spill Cleanup Branch Director.
	Obtain information on the location of any spilled material and its projected movements from Planning Section Chief.
	Establish zones of operations.
	Identify staging areas, support services, and spill response contractors to be used for the response operations.
	Identify and arrange with Logistics Section to obtain containment boom, recovery equipment, vessels, cranes pumps, and any other equipment to be used to contain and recover spilled material.
	Assign Field Supervisors and arrange to receive regular progress reports
	Coordinate activities with OSRO, cooperatives, private contractors, specialized service companies, government agencies, and other response groups.
	Ensure that all person comply with the site-specific H&S plan.
	Evaluate the effectiveness of offshore response techniques; adjust techniques and equipment as necessary to enhance response effectiveness.
	Approve changes to offshore response section of the tactical operations portion Incident Action Plans.
	Provide Spill Cleanup Branch Director with information on all agency contacts.
	Provide Spill Cleanup Branch Director and Waste Management Unit Leader with information on the nature and quantity of liquid, solid, and/or hazardous wastes generated during offshore response recovery operations.
	Provide Spill Cleanup Branch Director with information on all special incidents and/or accidents.
	Provide Spill Cleanup Branch Director with recommendations on the timing of the release of equipment and/or manpower.
	Document actions.

**Table ERAP E.1  
Incident Command System**

Incident Command System Position	Duties/Responsibilities
Shoreline Protection Unit Leader	Obtain initial briefing from Spill Cleanup Branch Director and attend daily tactical operations planning meetings and briefing meetings.
	Provide Spill Cleanup Branch Director with information on manpower, equipment, and material needs for unit operations.
	Supply Spill Cleanup Branch Director with information for Situation Status Reports and the onshore response section for the tactical operations portion of Incident Action Plans: <ul style="list-style-type: none"><li>• Summary of current actions</li><li>• Identification of the amount and type of onshore area(s) affected and degree of contamination</li><li>• Identification of area(s) to be protected/cleaned</li><li>• Identification of response technique(s) to be employed</li><li>• List of equipment to be used</li><li>• List of personnel resources to be used</li></ul>
	Obtain weather forecasts from Spill Cleanup Branch Director.
	Obtain advice from the Environmental Unit Leader and regulatory agencies on: <ul style="list-style-type: none"><li>• Location of Sensitive areas</li><li>• Prioritization of areas to be protected</li><li>• Recommended shoreline protection equipment and techniques</li></ul>
	Coordinate with the Environmental Unit Leader to develop an overall Shoreline Protection Plan and submit completed plan to Spill Cleanup Branch Director.
	Establish zones of operations.
	Identify staging area(s) and support services/contractors needed.
	Identify and obtain the manpower, equipment, and materials needed for shoreline protection operations.
	Assign Field Supervisors and develop a method to receive regular progress reports.
	Evaluate effectiveness of shoreline protection techniques; adjust techniques and/or equipment as necessary to enhance effectiveness.
	Provide the Spill Cleanup Branch Director and Waste Management Unit Leader with information on the nature and quantity of liquid/solid/hazardous wastes generated during shoreline protection operations.
	Provide the Spill Cleanup Branch Director with information on special incidents and/or accidents.
	Provide the Spill Cleanup Branch Director with recommendation on the timing of the release of equipment and/or personnel.
	Document actions.

**Table ERAP E.1  
Incident Command System**

Incident Command System Position	Duties/Responsibilities
Shoreline Cleanup Unit Leader	Obtain initial briefing from Spill Cleanup Branch Director and attend daily tactical operations planning meetings and briefing meetings.
	Provide Spill Cleanup Branch Director with information on manpower, equipment, and material needs for unit operations.
	Supply Spill Cleanup Branch Director with information for Situation Status Reports and the onshore response section for the tactical operations portion of Incident Action Plans: <ul style="list-style-type: none"><li>• Summary of current actions</li><li>• Identification of the amount and type of onshore area(s) affected and degree of contamination</li><li>• Identification of area(s) to be protected/cleaned</li><li>• Identification of response technique(s) to be employed</li><li>• List of equipment to be used</li><li>• List of personnel resources to be used</li></ul>
	Obtain weather forecasts from Spill Cleanup Branch Director.
	Coordinate with Environmental Unit Leader to develop an overall Shoreline Response Plan and submit completed plan to Spill Cleanup Branch Director.
	Establish zones of operations.
	Identify staging base(s) and support services/contractors.
	Coordinate with Environmental Unit Leader to identify appropriate shoreline response techniques.
	Identify and arrange to obtain heavy equipment, containment booms, recovery equipment, pressure washers, pumps, sorbent materials, and any other equipment needed to contain and recover spilled material.
	Assign Field Supervisor and develop a method to receive regular progress reports.
	Ensure that all personnel comply with the site-specific H&S plan.
	Evaluate effectiveness of shoreline response techniques; adjust techniques and/or equipment as necessary to enhance effectiveness.
	Approve changes to Shoreline Response Plan; provide updated/modified plan to Spill Cleanup Branch Director.
	Provide Spill Cleanup Branch Director with information on all regulatory agency contacts.
	Provide Spill Cleanup Branch Director and Waste Management Unit Leader with information on nature and quantity of liquid/solid/hazardous wastes generated during onshore cleanup operations.
	Provide Spill Cleanup Branch Director with information on all special incidents and/or accidents.
	Provide Spill Cleanup Branch Director with recommendations on the timing of the release of equipment and/or personnel resources.
	Document actions.

**Table ERAP E.1  
Incident Command System**

Incident Command System Position	Duties/Responsibilities
Surveillance Unit Leader	Obtain initial briefing from Spill Cleanup Branch Director and attend daily planning/briefing meetings.
	Provide Spill Cleanup Branch Director with information on manpower, equipment, and material needs for unit operations.
	Establish a surveillance program that adequately supports the needs of the Operations and Planning Sections.
	Activate external surveillance resources.
	Coordinate the acquisition and scheduling of surveillance aircraft through the Air Operations Onsite Unit Leader.
	Obtain the following resources to support surveillance operations: <ul style="list-style-type: none"> <li>• Aircraft</li> <li>• Up-to-date maps</li> <li>• Surveillance specialists</li> <li>• Hand-held radios</li> <li>• Other portable communications equipment</li> <li>• Cameras</li> <li>• Video recorders</li> </ul>
	Provide Spill Cleanup Branch Director and Reports and Status Division Supervisor with surveillance information for use in response operations and Situation Status Reports, respectively.
	Coordinate the U.S. Coast Guard and Federal Aviation Administration to ensure capability of restricting sea and air space as needed.
	Locate the current position and physical appearance of any spilled material to support: <ul style="list-style-type: none"> <li>• Assessments designed to evaluate the threat posed by any spilled material to environmentally, economically, and/or socially sensitive areas</li> <li>• Trajectory simulations</li> <li>• Offshore containment and recovery operations</li> <li>• Shoreline protection operations</li> <li>• Shoreline containment and recovery operations</li> <li>• Wildlife capture operations</li> </ul>
	Participate in debriefing of surveillance personnel.
	Document actions.

**Table ERAP E.1  
Incident Command System**

Incident Command System Position	Duties/Responsibilities
Wildlife Rescue Unit Leader	Obtain initial briefing from Spill Cleanup Branch Director and attend daily planning/briefing meetings.
	Provide Spill Cleanup Branch Director with information on the manpower, equipment, and material needs for unit operations.
	Supply Spill Cleanup Branch Director with information on wildlife rescue operations for inclusion in Incident Action Plans and Situation Status Reports: <ul style="list-style-type: none"> <li>• Summary of current actions</li> <li>• Impacts to wildlife</li> <li>• Status of wildlife capture, cleaning, and rehabilitation operations</li> </ul>
	Coordinate with Shoreline Protection Unit Leader and Shoreline Cleanup Unit Leader to identify response techniques to protect threatened wildlife and/or sensitive habitat areas.
	Receive legal advice from Legal Officer on matters related to the handling of listed species.
	Coordinate with Environmental Unit Leader and resource agencies to develop procedures for the capture, transportation, cleaning, rehabilitation and release of oiled wildlife.
	Coordinate with Government Liaison Officer to obtain permits for handling wildlife.
	Supervise the construction and operation of wildlife rehabilitation centers if adequate facilities are not readily available.
	Coordinate with resource agencies to identify and obtain wildlife capture and rehabilitation experts to conduct capture and rehabilitation operations.
	Document actions.

**Table ERAP E.1  
Incident Command System**

Incident Command System Position	Duties/Responsibilities
Waste Management Unit Leader	Obtain initial briefing from Spill Cleanup Branch Director and attend daily planning/briefing meetings.
	Provide Spill Cleanup Branch Director with information on manpower, equipment, material needs for unit operations.
	Provide Spill Cleanup Branch Director and Situation Unit Leader with information on waste disposal operations for inclusion in Incident Action Plans and Situation Status Reports: <ul style="list-style-type: none"><li>• Summary of current actions</li><li>• Type and quantity of wastes being generated, recovered, stored, and disposed</li><li>• Waste storage facility being used</li><li>• Waste disposal facilities being used</li></ul>
	Coordinate with Environmental Unit Leader to determine all applicable federal, state, and local laws, regulations, ordinances, and standards applicable to the collection, transportation, storage, treatment, and disposal of wastes.
	Coordinate with Government Liaison Officer to obtain all necessary permits and approvals for transportation, storage, treatment, and disposal of wastes.
	Coordinate with Environmental Unit Leader to collect and present environmental information required to support waste management permit applications.
	Provide Logistics Section Chief with information on the manpower, equipment, and materials needed to carry out waste collection, transportation, storage, treatment, and disposal operations.
	Prepare and submit a Waste Management Plan to the Planning Section Chief.
	Gather information on contractors available to assist in waste collection, transportation, storage, treatment, and disposal operations.
	Provide Spill Cleanup Branch Director with recommendations on methods that can be applied to minimize the generation of wastes during response operations.
	Develop a system for the segregation of wastes to assist in storage, treatment, and disposal operations.
	Ensure that all personnel comply with the site-specific H&S plan.
	Assign Field Supervisors and receive regular progress reports
	Approve changes to the Waste Management Plan; provide information on changes to the Spill Cleanup Branch Director.
	Continuously review waste handling, storage, treatment, and disposal operations to identify and resolve problems and to develop recommendations on how to improve the effectiveness and/or efficiency of waste collection, transportation, storage, treatment, and/or disposal operations.
	Provide Spill Cleanup Unit Leader with information on all special incidents and/or accidents.
	Provide Spill Cleanup Unit with recommendations on the timing of the release of equipment and/or personnel resources.
	Document actions.

Table ERAP E.1 Incident Command System	
Incident Command System Position	Duties/Responsibilities
Spill Adviser	Obtain initial briefing from Spill Cleanup Branch Director and attend daily tactical operations and planning/briefing meetings.
	Coordinate with the Spill Cleanup Branch Director to ensure that appropriate equipment and materials are ordered to support response operations.
	Coordinate with the Environmental Unit Leader and Surveillance Unit Leader to identify areas potentially impacted by spilled oil.
	Coordinate with the Offshore, Shoreline Protection, Shoreline Cleanup, and Environmental Unit leaders to recommend response equipment and techniques to the Spill Cleanup Branch Director.
	Identify and evaluate alternative response equipment and techniques that will enhance the effectiveness of response operations and make appropriate recommendations to the Spill Cleanup Branch Director.
	Document actions.

**Table ERAP E.1  
Incident Command System**

Incident Command System Position	Duties/Responsibilities
Planning Section Chief	Obtain initial briefing from AIC, attend daily planning meetings, and conduct briefing meetings with section personnel.
	Provide Logistics Section Chief with information on manpower, equipment, and material needs for section operations.
	Supervise the preparation of Incident Action Plans.
	Brief Section Unit Leaders on the contents of Incident Action Plans and other matters related to section operations: <ul style="list-style-type: none"><li>• Verify that section personnel have most recent plan.</li><li>• Make/verify assignments.</li><li>• Establish/review reporting requirements.</li></ul>
	Ensure that systems and lines of communications are established that will facilitate the preparation and distribution of Incident Action Plans.
	Ensure that any incident-specific plans, reports, or other documents required by the RIC, FIC, and or regulatory agencies during or following the completion of response operations are compiled in a timely, efficient, and satisfactory manner.
	Ensure that systems are established to facilitate the collection, evaluation, analysis, and dissemination of environmental, cultural, and social information and data. In an oil/hazardous substance spill, this may include information on slick movements, potential spill-related impacts to environmentally sensitive areas, and air and water quality considerations.
	Advise FIC on all environmental issues relating to response operations.
	Ensure all environmental requirements are compiled with and communicated to the FIC and his/her staff.
	Ensure that systems are established to facilitate the collection, analysis, verification, and dissemination of information on the status of response resources and operations.
	Provide Public Affairs Officer with accurate, up-to-date information which may include: <ul style="list-style-type: none"><li>• Fate and effects of spilled oil/hazardous substances</li><li>• Location of spilled oil/hazardous substances</li><li>• Status of evacuation operations</li><li>• Status of firefighting operations</li><li>• Weather and other site conditions</li><li>• Types and number of wildlife affected by the incident</li><li>• Status of wildlife rehabilitation efforts</li><li>• Statistical summaries of emergency response operations</li></ul>
	Coordinate with Government Liaison Officer in obtaining government agency approvals.
	Supervise the compilation of environmental information necessary to obtain regulatory agency approvals.
	Provide FIC information on all regulatory agency contacts.
	Document actions.

**Table ERAP E.1  
Incident Command System**

Incident Command System Position	Duties/Responsibilities
Plan Development Unit Leader	Obtain initial briefing from Planning Section Chief and attend planning/briefing meetings.
	Provide Planning Section Chief with information on manpower, equipment, and material needs for unit operations.
	Coordinate with Section Chiefs and Command Staff to gather information for Incident Action Plans including: <ul style="list-style-type: none"> <li>• Cover page</li> <li>• Incident objectives and response priorities</li> <li>• Health and Safety message</li> <li>• Section assignments</li> <li>• Division/group assignments</li> <li>• Environmental Operations plan</li> <li>• Communications plan</li> <li>• Air Operations plan</li> <li>• Medical plan</li> </ul>
	Prepare, reproduce, and distribute Incident Action Plans.
	Document actions.
Document Unit Leader	Obtain initial briefing from Planning Section Chief and attend planning/briefing meetings.
	Provide Planning Section Chief with information on manpower, equipment, and material needs for unit operations.
	Assist Legal Officer and History Division Supervisor to develop Documentation Guidelines for distribution to appropriate response personnel.
	Distribute copies of incident file index to appropriate response personnel.
	Direct the organization, maintenance, and storage of incident files in a convenient, secure location.
	Obtain approval from Planning Section Chief prior to release of documentation.
	Ensure that duplication services are available for the incident, and respond to duplication requests.
	Supervise the duplication and filing of all official forms and reports.
	Document actions.

**Table ERAP E.1  
Incident Command System**

Incident Command System Position	Duties/Responsibilities
Reports and Status Division Supervisor	Obtain initial briefing from the Documentation Unit Leader.
	Provide Documentation Unit Leader with information on manpower, equipment, and material needs for the division.
	Coordinate with Section Chief and Command Staff to gather information for Situation Status Reports including: <ul style="list-style-type: none"> <li>• Status of spilled material(s)</li> <li>• Status of equipment resources currently assigned, available, or out-of- service</li> <li>• Status of personnel resources</li> <li>• Status of shoreline impacts</li> <li>• Status of wildlife impacts</li> <li>• Status of waste management operations</li> </ul>
	Prepare, reproduce, and distribute Situation Status Reports.
	Display pertinent information regarding the status of response operations information in the Command Center: <ul style="list-style-type: none"> <li>• Maps depicting location of spill, spill trajectories, response operations, staging areas, and other information as necessary;</li> <li>• Status of equipment and personnel resources currently assigned, available, and/or enroute;</li> <li>• Status of oily waste/hazardous waste management operations including quantity of oil/hazardous substance spill and quantity of oil, oily water, hazardous waste, and debris recovered; and</li> <li>• Status of shoreline impacts</li> </ul>
	Ensure that the Documentation Unit Leader receives copies of all Situation Status Reports.
	Coordinate activities with RIC's Reports and Status personnel.
	Document actions.
History Division Supervisor	Obtain initial briefing from Documentation Unit Leader.
	Provide Documentation Unit Leader with information on manpower, equipment, and material needs for division.
	Assist the Documentation Unit Leader to develop documentation guidelines and distribute guidelines to appropriate response personnel
	Distribute and collect log books from response personnel.
	Establish a filing system for all incident files and provide index to Documentation Unit Leader.
	Obtain copies of all Incident Action Plans, Situation Status Report, and related internal planning documents for files.
	Obtain copies of all internal/external correspondence pertaining to the incident and/or incident response for files.
	Coordinate activities with RIC's History Division Supervisor.
	Assist the Investigation and Testing Officer in the compilation of a written record/report of the incident and all aspects of the response effort.
	Document actions.

Table ERAP E.1 Incident Command System	
Incident Command System Position	Duties/Responsibilities
Environmental Unit Leader	Obtain initial briefing from Planning Section Chief and attend daily planning/briefing meetings.
	Provide Planning Section Chief with information on manpower, equipment, and material needs for unit operations.
	Prepare Environmental Operations Plans for inclusion in Incident Action Plans.
	Collect and maintain baseline environmental data from potentially affected areas.
	Provide Operations Section Chief with information on the potential environmental impacts of response operations.
	Supervise the compilation of environmental information to support permit applications and/or efforts to obtain required regulatory approvals.
	Be familiar with existing environmental regulations and restrictions within an incident area.
	Coordinate with Government Liaison Officer to obtain necessary regulatory approvals for environmentally related permits and approvals.
	Coordinate with Waste Management Unit Leader and Government Liaison Officer to obtain all necessary waste management permits and approvals.
	Coordinate with regulatory agencies to identify environmentally sensitive areas and wildlife habitats.
	Coordinate wildlife rescue and rehabilitation operation with federal, state, and local resource agencies.
	Coordinate with Shoreline Protection Unit Leader to prioritize sensitive habitat areas for protection and/or cleanup operations.
	Provide Shoreline Cleanup Unit Leader advice on cleanup techniques that will minimize secondary impacts to affected wildlife and/or sensitive habitat areas.
	Arrange for environmental specialists to collect data and assess impacts to: <ul style="list-style-type: none"> <li>• Water quality</li> <li>• Air quality</li> <li>• Commercial and sport fisheries</li> <li>• Human health</li> <li>• Social Impacts</li> </ul>
	Identify experts to perform Natural Resource Damage Assessments and coordinate Natural Resource Damage Assessment operations with Legal Officer.
	Document actions.

**Table ERAP E.1  
Incident Command System**

Incident Command System Position	Duties/Responsibilities
Technical Specialists	Obtain initial briefing from Planning Section Chief.
	Attend planning/briefing meetings as directed by Planning Section Chief.
	Conduct required activities within the expert's area of expertise as directed by Planning Section Chief.
	Conduct activities in accordance with the site-specific H&S plan.
	Provide regular status reports to Planning Section Chief.
	Document actions.
Logistics Section Chief	Obtain initial briefing from DFIC and attend daily planning meetings and conduct briefings with Logistics Section personnel.
	<p>Supervise preparation of logistic support and services portions of Incident Action Plans:</p> <ul style="list-style-type: none"> <li>• Make duty assignments.</li> <li>• Prepare and post Logistics Section Organization Chart.</li> <li>• Obtain summary of current actions.</li> <li>• Equipment, materials, and services on-scene and where they are located.</li> <li>• Equipment, materials, and services enroute and estimated time of arrival (ETA).</li> </ul>
	Provide logistic support and services information to Reports and Status Division Supervisor for inclusion in Situation Status Reports.
	<p>Brief Unit Leaders on contents of Incident Action Plans and other matters related to section operations:</p> <ul style="list-style-type: none"> <li>• Verify that unit leaders have most current plan.</li> <li>• Make/verify assignments.</li> <li>• Establish/review reporting requirements.</li> </ul> <p>Coordinate with Operations Section Chief to identify and ensure the timely and efficient provisions of field support services including:</p> <ul style="list-style-type: none"> <li>• Evacuation vessels</li> <li>• Communications equipment</li> <li>• Berthing and/or housing</li> <li>• Decontamination units</li> <li>• Potable water</li> <li>• Food</li> <li>• Sanitary facilities</li> <li>• Fuel</li> <li>• Transportation for personnel and/or supplies (by various modes - air, ground, water)</li> <li>• Waste handling</li> <li>• Security services</li> <li>• Others</li> </ul>
	Ensure that logistics support and services needs are met in a timely and efficient manner and in a manner that maximizes personnel safety.
	Ensure that guidelines, procedures, forms, and data management systems necessary to manage the acquisition of equipment, control inventory, and account for expenditures made during the response operations are in place.

Table ERAP E.1 Incident Command System	
Incident Command System Position	Duties/Responsibilities
Logistics Section Chief (Continued)	Ensure that an overall inventory is maintained for all equipment and materials purchased, rented, borrowed, or otherwise obtained during the response operations.
	Ensure that warehouse space is obtained to store equipment and materials.
	Ensure that programs are in place to inspect and service equipment, obtain and store spare parts, and repair or replace damaged or defective equipment.
	Ensure that records are maintained on transportation equipment and services used, materials and services provided, and contracts executed during response operations.
	Provide Operations Section with recommendations on the timing of the release of logistics service and support personnel resources and equipment.
	Document actions.
Purchasing Unit Leader	Obtain initial briefing from Logistics Section Chief and attend daily briefings.
	Provide Logistics Section Chief with information on manpower, equipment, and material needs for unit operations.
	Develop and implement a purchasing plan to organize the acquisition of equipment, materials, and services required for response operations.
	Prepare guidelines procedures, forms, and data management systems necessary to manage the acquisition of equipment, control inventory, and account for expenditures.
	Establish a system to keep track of equipment and materials that are enroute to an incident scene including: <ul style="list-style-type: none"> <li>• Date shipped</li> <li>• Shipment made</li> <li>• Shipment scheduled</li> <li>• Location and date of intermediate stops</li> <li>• Date due at final destination</li> <li>• Location of final destination</li> </ul>
	Activate contracts/agreements as needed to provide equipment, materials, and services for response operations and evaluate the need for additional agreements.
	Prepare and process all necessary purchase/work orders.
	Document actions.

**Table ERAP E.1  
Incident Command System**

Incident Command System Position	Duties/Responsibilities
Facilities Unit Leader	Obtain initial briefing from Logistics Section Chief and attend daily briefings.
	Provide Logistics Section Chief with information on manpower, equipment, and material needs for unit operations.
	Provide daily updates to the Logistics Section Chief on the status of facilities being used, constructed, or ordered.
	Activate incident facilities and assign a manager to each.
	Ensure adequate personnel are available to operate and maintain facilities.
	Activate wildlife cleaning and rehabilitation centers.
	Provide sleeping facilities.
	Coordinate the activation of facilities with Security Unit Leader to ensure that adequate security is available.
	Provide for facility maintenance services.
	Document actions.
Security Unit Leader	Obtain initial briefing from Logistics Section Chief and attend daily briefings.
	Provide Logistics Section Chief with information on the manpower, equipment, and material needs for unit operations.
	Coordinate with section chiefs to identify security needs.
	Arrange for security at the following locations: <ul style="list-style-type: none"> <li>• Command Center</li> <li>• Communications center(s) and facilities</li> <li>• Staging area(s)</li> <li>• Warehouse(s)</li> <li>• Wildlife Rescue and Rehabilitation Center(s)</li> <li>• Other facilities as required</li> </ul>
	Establish a procedure to ensure authorized personnel rapid access to secured facilities.
	Maintain a record of all visitors to secured facilities.
	Arrange for security escorts for visitors.
	Coordinate security operation with local, state, and federal law enforcement personnel.
	Coordinate with U.S. Coast Guard to restrict access to areas where offshore response operations are being conducted.
	Arrange for the use of contract security personnel as required.
	Document actions.

**Table ERAP E.1  
Incident Command System**

Incident Command System Position	Duties/Responsibilities
Transportation Unit Leader	Obtain initial briefing from Logistics Section Chief and attend daily briefing meetings.
	Provide Logistics Section Chief with information on manpower, equipment, and material needs for unit operations.
	Provide Logistics Section Chief with information on transportation equipment for the Situation Status Report and logistics and services portions of Incident Action Plans: <ul style="list-style-type: none"> <li>• Transportation equipment on-scene</li> <li>• Location and mission(s) of transportation equipment on-scene</li> <li>• Transportation equipment enroute and ETA</li> </ul>
	Coordinate with Operations Section Chief to identify transportation needs associated with response operations.
	Coordinate with Environmental Unit Leader to identify transportation needs associated with wildlife rescue operations.
	Coordinate with Purchasing Unit Leader to identify the transportation needs associated with moving equipment and materials to, within, and from an incident scene.
	Organize and direct the transportation of manpower, equipment, and materials during response operations.
	Coordinate with federal, state, and local officials when establishing marine and overland routes in order to expedite the movement of personnel, materials, and recovered material while still complying with applicable laws.
	Coordinate with Operations Section Chief to ensure that transportation resources are properly allocated and used during response operations.
	Develop a system to keep track and maintain a record of all transportation resources used during response operations.
	Coordinate with Purchasing Unit Leader to execute contracts for obtaining transportation equipment.
	Establish an inspection program to determine the condition of vessels and vehicles used to transport personnel, equipment, and materials. An inspection should be performed both prior to use and prior to release from response operations.
	Maintain transportation equipment maintenance records.
	Document actions.

**Table ERAP E.1  
Incident Command System**

Incident Command System Position	Duties/Responsibilities
Communications Unit Leader	Obtain initial briefing from Logistics Section Chief and attend daily briefings.
	Provide Logistics Section Chief with information on manpower, equipment, and material needs for unit operations.
	Prepare Radio Communications Plan for Incident Action Plans.
	Obtain information for on-scene communications equipment including: <ul style="list-style-type: none"> <li>• Channels</li> <li>• Functions</li> <li>• Frequencies</li> <li>• Assignments</li> </ul>
	Verify that existing communications equipment is operations and obtain additional communications equipment as needed to accommodate response operations.
	Obtain information on communications equipment enroute to the response and the ETA at the scene.
	Coordinate with section chiefs to identify communications needs and ensure timely and efficient response to needs to support operations.
	Arrange to install of an adequate telephone system in the Command Center.
	Establish a radio base system in the Command Center.
	Ensure the establishment of a dedicated communication network that will allow for land-to-land, land-to-sea, sea-to-sea, land-to-air, sea-to-air, and air-to-air communications.
	Ensure that communications equipment is fully operation throughout response.
	Ensure that records are maintained on communications equipment distributed during emergency response operations.
	Obtain necessary contract support to man and/or maintain communications equipment.
	Establish telephone "hot lines" as needed.
	Provide Logistics Section Chief with recommendations on the timing of the release of communication equipment.
	Document actions.

**Table ERAP E.1  
Incident Command System**

Incident Command System Position	Duties/Responsibilities
Support Services Unit Leader	Obtain initial briefing from Logistics Section Chief and attend daily briefings.
	Provide Logistics Section Chief with information on manpower, equipment, and material needs for unit operations.
	Coordinate with section chiefs to identify and meet personnel needs.
	Provide Logistics Section Chief with daily updates on the status of personnel resources be used, needed, or currently enroute.
	Schedule/track amount of time individuals are working and coordinate their replacement.
	Coordinate with Public Affairs Officer to publicize how persons can volunteer to assist in response operations.
	Determine the food, potable water, and sanitation requirements for the response operations.
	Assess the conditions at each location and determine and arrange for the most appropriate food service method (e.g., restaurant, catering, mess hall, etc.).
	Coordinate with Logistics Section Chief to ensure that contracts are executed to obtain necessary equipment and supplies for food service at each location.
	Verify that potable water and well-balanced meals are being served at each location
	Coordinate with IC and RIC in the handling of all human resource issues that may arise during the response operations, including those related to payroll, overtime, benefits, and job protection.
	Determine the lodging requirements for response personnel, assess the current availability of lodging services, and arrange lodging for response personnel as necessary.
	Coordinate with Facilities Unit Leader to establish temporary sleeping quarters onsite if necessary.
	Assess the need for sanitary facilities at all areas of operation.
	Document actions.

**Table ERAP E.1  
Incident Command System**

Incident Command System Position	Duties/Responsibilities
Stores and Supplies Unit Leader	Obtain initial briefing from Logistics Section Chief and attend daily briefings.
	Provide Logistics Section Chief with information on manpower, equipment, and material needs for unit operations.
	Provide Logistics Section Chief with information on equipment and materials for the logistics and services portion of Incident Action Plans: <ul style="list-style-type: none"> <li>• Equipment and materials on-scene</li> <li>• Location(s) of equipment and materials</li> <li>• Equipment and materials enroute and the ETA</li> </ul>
	Coordinate with section chiefs to determine equipment and material needs for each section.
	Contact sources of equipment and materials to obtain: <ul style="list-style-type: none"> <li>• Accurate and up-to-date information on the type, quantity, and availability of equipment and materials</li> <li>• The conditions (new, reconditioned, or used) of equipment and materials</li> <li>• The terms and conditions for the purchase, lease, and/or rental of equipment and materials</li> <li>• How the equipment and materials will be shipped, where they will be delivered, and when will they arrive</li> <li>• Whether additional equipment and materials are needed to make ordered equipment and/or materials fully operational</li> <li>• The availability of technicians to explain the operation and maintenance of equipment and/or supplies</li> <li>• The availability of spare parts</li> </ul>
	Coordinate the purchase of all equipment and materials with Purchasing Unit Leader.
	Establish an inventory system for equipment and materials stored in central receiving point(s).
	Establish a system to keep track of equipment and materials used during response operations.
	Establish an inspection and maintenance program for equipment and materials used during response operations.
	Coordinate with Transportation and Air Operations Onsite Unit Leaders when mobilizing and/or delivering equipment and materials.
	Coordinate with Facilities Unit Leader to ensure that adequate warehouse space and staging area(s) are available.
	Document actions.

Table ERAP E.1 Incident Command System	
Incident Command System Position	Duties/Responsibilities
Air Operations Onsite Unit Leader	Obtain initial briefing from Logistics Section Chief and attend daily briefings.
	Provide Logistics Section Chief with information on manpower, equipment, and material needs for unit operations.
	Provide Logistics Section Chief with information on aircraft for the Situation Status Report and logistics and services portions of Incident Action Plans:
	<ul style="list-style-type: none"> <li>• Aircraft on-scene</li> <li>• Location and mission(s) of aircraft</li> <li>• Aircraft enroute and ETA</li> </ul>
	Coordinate with Operations Section Chief to identify air transportation needs associated with response and surveillance operations.
	Coordinate with Purchasing Unit Leader to identify the air transportation needs associated with moving equipment and materials within/to a response site.
	Coordinate with Public Affairs Officer to identify aircraft needs for media personnel.
	Coordinate with Government Liaison Officer to identify aircraft needs for government officials.
	Coordinate with Medical Unit Leader to identify aircraft needs for emergency medical services.
	Coordinate with federal, state, and local officials in establishing air routes that will expedite the movement of personnel, equipment and materials while still complying with applicable laws and regulations.
	Coordinate with Operations Section Chief to ensure that air transport resources are properly allocated and utilized.
	Develop a system to track all air transport resources used during the response.
	Coordinate with Purchasing Unit Leader to execute contracts for air transportation needs.
	Establish an inspection program to ensure that aircraft used to transport personnel, equipment and materials meet regulatory standards.
	Maintain aircraft maintenance records.
	Document action.

**Table ERAP E.1  
Incident Command System**

Incident Command System Position	Duties/Responsibilities
Finance Section Chief	Obtain initial briefing from AIC and attend daily planning meetings; conduct briefings with Finance Section personnel.
	Provide DFIC with information on personnel, equipment, and material needs for section operations.
	Brief Finance Section Personnel on contents of Incident Action Plans: <ul style="list-style-type: none"> <li>• Verify that section personnel have most current plan.</li> <li>• Make/verify assignments.</li> <li>• Establish/review reporting requirements.</li> </ul>
	Provide DFIC with information on the financial implications of actions taken (to be taken) during response operations.
	Discuss/advise FIC and staff on issues regarding insurance coverage and exclusions, claims management processing, and settlements.
	Coordinate with RIC's Insurance/Claims and Compensation personnel to ensure that loss adjusters are appointed.
	Make duty assignments and supervise operations of Finance Section.
	Facilitate the preparation and distribution of guideline, procedures, forms, and the establishment of a data management system necessary to account for expenditures/claims made during response operations.
	Coordinate with Purchasing Unit Leader the purchasing and accounting functions.
	Supervise the development and administration of cash accounts.
	Ensure that purchase requisitions and work orders are prepared and processed in a timely manner.
	Verify that obligation documents initiated during response operations are properly prepared.
	Coordinate with auditors to ensure proper documentation of expenditures.
	Ensure the appropriate cost and accounting control systems are established.
	Provide accounting function as directed, including auditing, billing, and documenting labor, materials, and services used.
	Administer vendor contracts, and service and equipment rental agreements.
	Ensure that adequate medical services and facilities are available for all response personnel.
	Coordinate the investigation and processing of claims.
	Provide FIC and staff with regular financial reports.
	Document actions.

**Table ERAP E.1  
Incident Command System**

Incident Command System Position	Duties/Responsibilities
Claims Unit Leader	Obtain initial briefing from Finance Section Chief and attend daily briefings.
	Provide Finance Section Chief with information on manpower, equipment, and material needs for unit operations.
	Coordinate with RIC's Claims and Compensation personnel to establish a system for the receipt, evaluation and processing of all claims.
	Determine the need for and location of claims offices.
	Receive advice from RIC's Finance Section Chief and Legal Officer during the processing of claims.
	Identify and obtain technical experts and contractors to assist in damage assessment and in the processing of claims.
	Coordinate the conduct of all damage assessment programs with the Environmental Unit Leader and the Legal Officer.
	Establish and maintain contact with RIC, Safety Officer, and Medical Unit Leader as required to prepare and process reports on injuries/deaths caused by the spill incident or resulting from response operations.
	Follow the status of hospitalized personnel and coordinate/prepare required administrative records on all injuries and deaths.
	Coordinate with Insurance personnel and RIC to determine insurance coverage and limits, and estimate insurance recovery costs.
	Consult with Insurance personnel at RIC, corporate insurance brokers and underwriters to determine documentation required for insurance purposes.
	Provide Government Liaison Officer, Finance Section Chief, and Public Affairs Officer with periodic reports on damage assessment/claims.
	Document actions.
Accounting Unit Leader	Obtain initial briefing from Finance Section Chief and attend daily briefings.
	Provide Finance Section Chief with information on manpower, equipment, and material needs for unit operations.
	Develop and implement an accounting system for response operations and maintain records of all accounting activities.
	Establish and maintain a cash account.
	Periodically analyze cost savings.
	Ensure all accounting records and document are prepared accurately.
	Maintain a cumulative cost/financial record.
	Serve as liaison with auditing personnel.
	Provide for records security.
	Document actions.

**Table ERAP E.1  
Incident Command System**

Incident Command System Position	Duties/Responsibilities
Medical Unit Leader	Obtain initial briefing from Finance Section Chief and attend daily briefings.
	Provide Finance Section Chief with information on manpower, equipment, and material needs for unit operations.
	Provide Finance Section Chief with information for the medical/health portion of Incident Action Plans: <ul style="list-style-type: none"> <li>• Description of major medical/health hazards and risks</li> <li>• Measures to avoid or mitigate medical/health hazards and risks</li> </ul>
	Prepare Medical Plans for inclusion in Incident Action Plans.
	Establish procedures for handling medical emergencies.
	Coordinate with Transportation, Air Operations Onsite, and Communications Unit Leaders to establish a transportation system and communications network to handle medical emergencies.
	Coordinate with Safety Officer to locate, establish, and man field first-aid stations.
	Assess current level of available medical services and activate additional facilities as necessary.
	Maintain an inventory of medical supplies and disburse as needed.
	Ensure that medical response personnel, equipment, and facilities are available to pickup, transport, treat, and care for injured personnel.
	Notify Support Services Unit Leader of all injuries/fatalities.
	Develop and maintain a record of all accidents/injuries/fatalities.
	Notify the appropriate Federal, State, and local government agencies of all medical/health-related accidents, incident, and/or problems and provide Logistics Section Chief with information on all regulatory agency contacts. Document actions.

### 1.3.2 Response Personnel

#### Phone Contact List Facility Response Personnel Resources

Table ERAP E.2 Facility Immediate Response Team (See Note below **)						
Name	Day Phone	24-hr Phone	Response Time (min)	Response Job	Training Type	Training Date
NAS Corpus Christi Fire Department Personnel						
Davis, B.	(512) 939-3491	(512) 939 3333	< 30	OSC	OSHA/ RCRA	--
Garcia, A.	(512) 939 3333	"	"	OSC	--	--
Rodriguez, J.	"	"	"	OSC	--	--
Veselka, J.	"	"	"	OSC	--	--
Sayles	"	"	"	See notes	HazMat Ops HazMat Tech	9/93 10/93
Talkington	"	"	"	"	HazMat Ops	9/93
Adams	"	"	"	"	HazMat Ops	9/93
Garza, L.	"	"	"	"	HazMat Ops HazMat Tech	9/93 9/91
Waldron	"	"	"	"	--	--
Grigsby	"	"	"	"	HazMat Ops	9/93
De la Pena	"	"	"	"	HazMat Ops	9/93
Trejo	"	"	"	"	HazMat Ops	9/93
Villarreal, V.	"	"	"	"	HazMat Ops	9/93
Gonzalez, R	"	"	"	"	HazMat Ops HazMat Tech	9/93 3/93
Esquivel	"	"	"	"	HazMat Ops	9/93
Herrera	"	"	"	"	HazMat Ops	9/93
Cook	"	"	"	"	--	--
Konitzer	"	"	"	"	HazMat Ops HazMat Tech	9/93 12/91
Dominguez	"	"	"	"	--	--
Retault	"	"	"	"	HazMat Ops	9/93
Young	"	"	"	"	HazMat Ops	9/93
F/C Villarreal	"	"	"	"	--	--
F/C Garza, G.	"	"	"	"	HazMat Ops	9/93
Gomez, J.	"	"	"	"	HazMat Ops	9/93
Suniga	"	"	"	"	--	--

Table ERAP E.2 Facility Immediate Response Team (See Note below **)						
Name	Day Phone	24-hr Phone	Response Time (min)	Response Job	Training Type	Training Date
Wilkinson	"	"	"	"	--	--
Flores	"	"	"	"	--	--
Escarzaga	"	"	"	"	HazMat Ops HazMat Tech	9/93 7/94
De Leon	"	"	"	"	HazMat Ops	9/93
Thompson	"	"	"	"	HazMat Ops	9/93
Wills	"	"	"	"	HazMat Ops HazMat Tech	9/93 7/94
Jackson	"	"	"	"	HazMat Ops	5/94
Armijo	"	"	"	"	HazMat Ops HazMat Tech	9/93 10/93
Lerma	"	"	"	"	HazMat Ops	9/93
Serenil	"	"	"	"	HazMat Ops	9/93
Barta	"	"	"	"	--	--
Barza, A.	"	"	"	"	--	--
Rossi, P.	"	"	"	"	--	--
Meeuwsen, C.	"	"	"	"	--	--
Tobin, A.	"	"	"	"	--	--
Spellings, M.	"	"	"	"	--	--
Stafford, B.	"	"	"	"	--	--
Canales, O.	"	"	"	"	--	--
Rosales, R.	"	"	"	"	--	--
Terrell, O.	"	"	"	"	--	--
Villasanz, D.	"	"	"	"	--	--
Gonzales, P.	"	"	"	"	HazMat Ops	9/93
Herschbach, E.	"	"	"	"	--	--
Grigsby, J.L.	"	"	"	"	HazMat Ops HazMat Tech	9/93 7/94
Encarnacion, J.	"	"	"	"	--	--
Rodriguez, D.	"	"	"	"	HazMat Ops	7/94
Guerra, V.	"	"	"	"	--	--
Viafranco, I.	"	"	"	"	--	--
Espinoza, J.	"	"	"	"		
Mercado, R.	"	"	"	"	--	--

Table ERAP E.2 Facility Immediate Response Team (See Note below **)						
Name	Day Phone	24-hr Phone	Response Time (min)	Response Job	Training Type	Training Date
Aranda, R.	"	"	"	"	--	--
Robles, A.	"	"	"	"	HazMat Ops HazMat Tech	9/93 7/93
Saenz, F.	"	"	"	"	--	--
Martinez, R.	"	"	"	"	--	--
Plata, M.	"	"	"	"	--	--
Heyne, A.	"	"	"	"	--	--
Rocheftort, R.	"	"	"	"	--	--
Gorena, D.	"	"	"	"	--	--
Saenz, J.	"	"	"	"	--	--
Vella, T.	"	"	"	"	--	-
NAS Corpus Christi Fuel Farm Personnel						
Richard James	(512) 939-3372	(512) 852-2318	< 30	Asst. Haz Coordinator	SCBA PPE C-Spill	6/6/89 7/30/85 7/30/85
C. Crummley	(512) 939-3372	(512) 939-2980	< 20	Fuel Branch Supervisor	PPE	11/89 12/90
Ami Turnball	(512) 939-6330	(512) 939-4438	< 7	OSC	40 hr Haz Mat OSHA/RCRA HAZWASTE	9/27/93 2/94 6/94
Ami Olton	(512) 939-8460	(512) 939-8460	< 20	OSC	Spill School 28 hr Haz Waste Haz Mat Response	11/91 12/91 3/94
Hazardous Waste/Environmental Support Personnel						
Rudy Ramos	(512) 939-2469	(512) 854-6135	15 min on NAS Corpus Christi	Not obtained	Not obtained	Not obtained
Gilbert Martinez	(512) 939-2469	(512) 664-8522	15 min on NAS Corpus Christi	Not obtained	Not obtained	Not obtained
Reynaldo Guerrero	(512) 939-2469	(512) 853-5707	15 min on NAS Corpus Christi	Not obtained	Not obtained	Not obtained
Enrique Espinosa	(512) 939-2469	(512) 595-4592	15 min on NAS Corpus Christi	Not obtained	Not obtained	Not obtained
Marcus Muniz	(512) 939-2469	(512) 854-6570	15 min on NAS Corpus Christi	Not obtained	Not obtained	Not obtained

**Table ERAP E.2**  
**Facility Immediate Response Team (See Note below \*\*)**

Name	Day Phone	24-hr Phone	Response Time (min)	Response Job	Training Type	Training Date
Florentino Pena	(512) 939-2469	(512) 884-7422	15 min on NAS Corpus Christi	Not obtained	Not obtained	Not obtained
Ross Ybarra	(512) 939-2469	(512) 851-2025	15 min on NAS Corpus Christi	Not obtained	Not obtained	Not obtained
Mariano Cervantes	(512) 939-2469	(512) 883-9817	15 min on NAS Corpus Christi	Not obtained	Not obtained	Not obtained
Ruben Garcia	(512) 939-2469	(512) 854-1632	15 min on NAS Corpus Christi	Not obtained	Not obtained	Not obtained
Osualdo Canales	(512) 939-2469	(512) 853-1380	15 min on NAS Corpus Christi	Not obtained	Not obtained	Not obtained
<b>ACCI Personnel, Tank Truck Drivers</b>						
Friend, J.D.	(512) 937-3491	(512) 937-3491	15 min on NAS Corpus Christi	Project Manager ACCI, Full Time	Not obtained	Not obtained
Adams, J.	(512) 937-3491	(512) 937-3491	15 min on NAS Corpus Christi	Service Station, Part Time	Not obtained	Not obtained
Benavides, S	(512) 937-3491	(512) 937-3491	15 min on NAS Corpus Christi	Driver, Operator, Full Time	Not obtained	Not obtained
Clayton, C	(512) 937-3491	(512) 937-3491	15 min on NAS Corpus Christi	Driver, Operator, Full Time	Not obtained	Not obtained
Cuellar, P.	(512) 937-3491	(512) 937-3491	15 min on NAS Corpus Christi	Driver, Operator, Full Time	Not obtained	Not obtained
Ewald, F.	(512) 937-3491	(512) 937-3491	15 min on NAS Corpus Christi	Fuel Distribution Systems Operator/ Supervisor, Full Time	Not obtained	Not obtained
Gordon, M.	(512) 937-3491	(512) 937-3491	15 min on NAS Corpus Christi	Dispatcher, Part Time	Not obtained	Not obtained
Giffen, N., Jr.	(512) 937-3491	(512) 937-3491	15 min on NAS Corpus Christi	Driver Operator, Full Time	Not obtained	Not obtained
Hoover, R.	(512) 937-3491	(512) 937-3491	15 min on NAS Corpus Christi	Driver Operator, Part Time	Not obtained	Not obtained
Kehoe, J.	(512) 937-3491	(512) 937-3491	15 min on NAS Corpus Christi	Dispatcher, Part time	Not obtained	Not obtained
Klinge, R.	(512) 937-3491	(512) 937-3491	15 min on NAS Corpus Christi	Cryogenic Distribution Systems Operator, Full Time	Not obtained	Not obtained

<p align="center"><b>Table ERAP E.2</b>  <b>Facility Immediate Response Team (See Note below **)</b></p>						
<b>Name</b>	<b>Day Phone</b>	<b>24-hr Phone</b>	<b>Response Time (min)</b>	<b>Response Job</b>	<b>Training Type</b>	<b>Training Date</b>
Lehmberg, R	(512) 937-3491	(512) 937-3491	15 min on NAS Corpus Christi	Driver Operator, Full Time	Not obtained	Not obtained
McCorkle, D.	(512) 937-3491	(512) 937-3491	15 min on NAS Corpus Christi	Dispatcher, Part Time	Not obtained	Not obtained
Miller, W.	(512) 937-3491	(512) 937-3491	15 min on NAS Corpus Christi	Driver Operator, Part Time	Not obtained	Not obtained
Morrow, M.	(512) 937-3491	(512) 937-3491	15 min on NAS Corpus Christi	Driver Operator, Full Time	Not obtained	Not obtained
Nazareno, E.	(512) 937-3491	(512) 937-3491	15 min on NAS Corpus Christi	Driver Operator, Part Time	Not obtained	Not obtained
Oxley, L.	(512) 937-3491	(512) 937-3491	15 min on NAS Corpus Christi	Driver Operator, Part Time	Not obtained	Not obtained
Perez, M., Sr.	(512) 937-3491	(512) 937-3491	15 min on NAS Corpus Christi	Driver Operator, Full Time	Not obtained	Not obtained
Perez, M., Jr.	(512) 937-3491	(512) 937-3491	15 min on NAS Corpus Christi	Fuel Distribution System Helper, Full Time	Not obtained	Not obtained
Richison, C.	(512) 937-3491	(512) 937-3491	15 min on NAS Corpus Christi	Driver Operator, Part Time	Not obtained	Not obtained
Robinson, O.	(512) 937-3491	(512) 937-3491	15 min on NAS Corpus Christi	Driver Operator, Full Time	Not obtained	Not obtained
Sandoval, R.	(512) 937-3491	(512) 937-3491	15 min on NAS Corpus Christi	Cyrogenic Systems Operator, Full Time	Not obtained	Not obtained
Scott, I.	(512) 937-3491	(512) 937-3491	15 min on NAS Corpus Christi	Dispatcher, Part Time	Not obtained	Not obtained
Shaffer, J.	(512) 937-3491	(512) 937-3491	15 min on NAS Corpus Christi	Driver Operator, Part Time	Not obtained	Not obtained
Silvas, J.	(512) 937-3491	(512) 937-3491	15 min on NAS Corpus Christi	Driver Operator, Full Time	Not obtained	Not obtained
Smith, W.	(512) 937-3491	(512) 937-3491	15 min on NAS Corpus Christi	Driver Operator, Part Time	Not obtained	Not obtained
Swinnea, R.	(512) 937-3491	(512) 937-3491	15 min on NAS Corpus Christi	Disptacther, Full Time	Not obtained	Not obtained
Toussaint, M.	(512) 937-3491	(512) 937-3491	15 min on NAS Corpus Christi	Driver Operator, Part Time	Not obtained	Not obtained

**Note:**    \*\* NAS Corpus Christi has a limited number of personnel for response and primarily relies on the Fire Department. The Fire Department has a reoccurring watch list of various Facility Response Personnel positions. The above list is as of January 1995.

**Table ERAP E.3  
Facility Emergency Response/Cleanup Team**

**Note:** NAS Corpus Christi has very limited first responder responsibilities and then only by contract.

Rather than have a specific set of employees as the Facility Response Team, all personnel on duty (i.e., the Fire Department) form an incident specific response team.

All personnel as assigned will serve as Ground Reconnaissance crews and perform (1) temporary repairs to leaking equipment, (2) use response kits to initiate spill cleanup and (3) keep Operations Section Chief apprised of ability to control/cleanup spill or cooperative Response contracted Corpus Christi Area Oil Spill Control Association or other subcontractors should be called in. They will remain on-scene to control operations until relieved by co-op response personnel or will supplement workers.

Also, Security personnel are trained to notify of leaks and take initial actions to stop them.

**Table ERAP E.4  
Facility Spill Management Team**

**Note:** NAS Corpus Christi has very limited first responder responsibilities and then only by contract.

Rather than have a specific set of employees to be the Facility Spill Management Team, all personnel on duty (i.e., Fire Department) form an incident-specific Spill Management Team.

See additional notes in Table ERAP E.3.

**Table ERAP E.5  
Other Facility Response Personnel  
(Building Emergency Coordinators, Support Personnel, Logistical Personnel, etc.)**

**Note:** NAS Corpus Christi does not have any other personnel assigned under contract as a resource, therefore specific information (i.e., name, etc.) is not available.

**Table ERAP E.6  
Available Adjacent Navy/DoD  
Emergency Response Personnel**

**Note:** Due to constant personnel turnover, DOD Response Teams comprise available individuals. Due to this constant turnover, specific information (i.e., name, etc.) is not available.

Personnel are available from:

- NAVSTA Ingleside: (512) 813-3663 (Cellular)

**Table ERAP E.7  
Emergency Response Contractors/cooperatives**

<b>Contractor</b>	<b>Day Phone</b>	<b>24-hr Phone</b>	<b>Response Time (Minutes)</b>	<b>Contract Responsibility/Capability</b>
Corpus Christi Area Oil Spill Control Association <sup>a</sup>	(512) 882-2656	(512) 882-2656	30 minutes	See Facility Response Plan Outline, Appendix B for contract and co-op specifics
NAVSUPSALV	(703) 607-2758	(703) 602-7527	Under Development	See Section Facility Response Plan Outline, Appendix B for details

**Note:** (a) NAS Corpus Christi's contractor is Corpus Christi Area Oil Spill Control Association ( i.e., the local Spill Response co-op).

## **TAB F — EQUIPMENT: FACILITY RESPONSE EQUIPMENT**

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**TAB F — EQUIPMENT: FACILITY RESPONSE EQUIPMENT**

**Note**

The EPA regulations recommend placing detailed equipment lists and equipment data in the Emergency Response Section of the facility's response plan. The U.S. Coast Guard (USCG) recommended format requires that sufficient equipment be listed in the emergency response plan to respond up to the average most probable spill and provide a full list in an appendix.

The Department of Defense (DoD) format will be a compromise between the two. A good emergency response plan should list equipment resources (similar to personnel resources) for quick review by the QI. However, the detail required by EPA is not warranted in an Immediate Action Plan. Therefore, DoD plans will include an abbreviated list (type, quantity, location, condition, etc.) in the emergency response plan, backed up by a detailed list in the Facility Response Plan (FRP). The emergency list should only be that immediately available to the QI through in-house supplies, contract arrangements, or via agreements with other DoD agencies.

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## 1.0 EQUIPMENT LIST

NAS Corpus Christi contracts for the major portion of spill response actions at NAS Corpus Christi (outside of Corpus Christi Army Depot (CCAD) and Hazardous (HAZ) response; i.e., significant oil spills). So, instead of extensive NAS Corpus Christi ownership, response equipment is under contract from the local Cooperative and the Navy Supervisor of Salvage (NAVSUPSALV) for "activation or call-up" during an incident. Additionally, no co-op response equipment is maintained or stage at NAS Corpus Christi. (Corpus Christi Area Oil Spill Association [CCAOSCA] has a final OSRO classification from the USCG: Class B for River & Canal and Class B for Inland & Nearshore environments).

(Note: It should be noted that this section should be periodically reviewed to ensure an adequate inventory is maintained as stocks are consumed.)

### Summary of NAS Corpus Christi Equipment Inventory:

Table	Inventory Item
N/A	Skimmers **
N/A	Vacuum Trucks **
N/A	Booms **
ERAP F.1	Pumping Equipment
ERAP F.2	Sorbents Stockpiled
ERAP F.3	Tools and Supplies
ERAP F.4	Communications Equipment (in use)
N/A	Communications Equipment (stored) **
ERAP F.5	Fire Fighting Equipment
ERAP F.6	Personal Protective Equipment
ERAP F.7	Fire Department HAZMAT Inventory
N/A	Miscellaneous Capital Equipment **
ERAP F.8	Equipment Available from Nearby DOD Installations
ERAP F.9	Equipment Available from Tier 1 Contractors
ERAP F.10	Equipment Available from Tier 2 Contractors
ERAP F.11	Equipment Available from Tier 3 Contractors

**\*\* Note:** NAS Corpus Christi has none of the marked equipment noted above (i.e., skimmers, vacuum trucks, booms, stored communication gear, or miscellaneous capital equipment). Instead of NAS Corpus Christi ownership, the equipment is contracted for from CCAOSCA as noted below:

Equipment Item	Source
Skimmers	— AOSCA contract
Vacuum Trucks	— AOSCA contract
Booms (Harbor)	— CAOSCA contract
Communications	— No extra communications equipment is stored at NAS Corpus Christi.
PPE	— Limited Personal Protective (PPE) Equipment is owned by NAS Corpus Christi.
Miscellaneous	— No miscellaneous equipment is owned.

Table ERAP F.1 Onsite Inventory: Pumping Equipment				
Topic		Pump Type 1	Pump Type 2	Pump Type 3
Pumps	Number	4	None	None
	Operating Power (compressed air, electric, etc.)	Compressed Air		
	Nominal Rate (gal/min)	25 gal/min		
	Hose Connection (3/4" twist-lock, etc.)	1 1/2" Cam Lock		
Manufacture	Brand	Marlow		
	Model	---		
	Year	1988		
Mobilization	Point of Contact Day Phone 24-Hour Phone	Environmental Manager (512) 939-3776 (512) 939-2383		
	Storage Location	Bldg 257		
	Transportation Needed	Scooter		
	Crew Needed	Two (02)		
	Time (hrs) (request → in use)	--		
Upkeep	Operational Status	Operational		
	Inspection Frequency	Weekly		
	Date of Last Inspection	Dec 1994		
Compatible Compressors	Number	N / A		
Compatible Hose	Length (ft)	Unknown		
Comments: This is NAS Corpus Christi-owned and maintained equipment.				
Common Navy pumps: Wilden Model M8: Comp Air, 155 gal/min (delivers 75-100), 3/4" twist-locks.				

Last updated: JANUARY 1995

**Table ERAP F.2**  
**Onsite Inventory: Sorbents (Stockpiled)**

<b>Stockpiled Item</b>	<b>National Stock Number</b>	<b>Stockpile Location</b>	<b>Purchase Unit</b>	<b>Sorption Capacity (gal/unit)</b>	<b>Stock on Hand (units)</b>	<b>Stocking Goal (units)</b>
Sorbent Boom (white)	3 M	Fire Department	10" x 20' sections	--	5	
Sorbent Boom (pink)	--	Fire Department	dike socks	?	22	
Sorbent Mats	--	Fire Department	pads		3 mats	
Sorbent Pad	--	Fire Department	pads	--	150	--
Sorbent Pillow	open purchase	Fire Department	pillows	--	15	
Sorbent Hogs/Dike Socks (blue)	--	Fire Department	hogs/socks		26	
Clay Absorbent	--	Bldg 257	50 # bag	--	50 bags	--
Envirogard Oil Absorbent Socks	OB15-4IS	Bldg 257	case: 15 w/4' sock	--	15 cases	--
Envirogard Oil Absorbent Sox	OB15-10LS	Bldg 257	case: 15 w/10' sock	--	6 cases	--
Envirogard Spill Kleen Acids, Bases	SK10-4	Bldg 257	carton: 10 w/4' sox	--	100	--
Enviroguard Spill Keen Granuals	--	Bldg 257	drum: 40 lbs	--	16	--
Envirograd Fume-Away	FC-38 (Fume / Gas absorbent)	Bldg 257	can: 36 lbs	--	36	--
Safe Step	--	Bldg 257	bag: 40 lbs	--	40	--
Sodium Bicarbonate	--	Bldg 257	bag: 40 lbs	--	25	--
<b>Total Sorption Capacity on Hand (gal): --</b>						
<b>Point of Contact: Environmental Manager Day Phone: (512) 939-3776 24-Hour Phone: (512) 939-2383</b>						
<b>Comments: Stockpiles are replaced on a "as used basis" to maintain inventories.</b>						
<b>Purchase of expendibles is ongoing; stocks are replenished as needed, so year of purchase information is unavailable.</b>						

Last updated: JANUARY 1995

<b>Table ERAP F.3</b> <b>Onsite Inventory: Tools and Supplies (Stockpiled)</b>					
<b>Stockpiled Item</b>	<b>National Stock Number</b>	<b>Stockpile Location</b>	<b>Unit</b>	<b>Stocking Goal (units)</b>	<b>Stock On Hand (units)</b>
Rope, 3/8" Nylon	4020-00-946-0436		roll		
Rope, 1/2" Nylon	4020-00-106-9361		roll		
Rope, 3/4" Nylon	4020-00-141-7152		roll		
Rope, 3/8" Manila	4020-00-834-0708		coil		
Rope, 1/2" Manila	4020-00-238-7732		coil		
Rope, 3/4" Manila	4020-00-238-7734		coil		
Parachute Cord	4020-00-246-0688		sl		
Shovel, Sq Nose (Long)	5120-00-293-3330		each		
Shovel, Sq Nose (Short)	5120-00-224-9326	<b>Fire Department</b>	each	<b>2</b>	
Shovel, Rd Nose (Long)	5120-00-188-8450		each		
Shovel, Rd Nose (Short)	5120-00-293-3336		each		
Mop Squeezer	7920-00-170-5449	<b>Bldg 257 Warehouse</b>	each	<b>2</b>	<b>2</b>
Mop, Cotton	7920-00-224-8726	"	each	<b>5</b>	<b>5</b>
Squeegee	-		each		
Can, Garbage (30-gal)	7240-00-160-0440	"	each	<b>1</b>	<b>1</b>
Rags	7920-00-223-1014	"	50 lb bale	<b>1</b>	<b>1</b>
Pail, Plastic (3-gal)	7240-00-246-1097	"	each	<b>1</b>	<b>1</b>
Pail, Plastic (5-gal)	7240-00-943-7105		each		
Bags, Sand	8105-00-965-2509		bale		
Gloves, Rubber	8415-00-935-2833		pair		
Goggles, Plastic	8465-01-004-2893		pair		
Bags, Plastic (large)	8105-01-183-9768	<b>Fire Department</b>	box	<b>85 bags</b>	
<b>Point of Contact: Environmental Manager Day Phone: (512) 939-3776 24-Hour Phone: (512) 939-2383</b>					
<b>Comments: NAS Corpus Christi does not stock pile hand tools in one location. Instead, the above listed items are available from various activities: Public Works, Corpus Christ Army Depot, Vehicle Maintenance, etc. and are to numerous to list.</b>					
<b>Purchase of tools and supplies is on-going; stocks are replenished as needed, so year of purchase information is unavailable.</b>					

Last updated: JULY 1996

<b>Table ERAP F.4</b> <b>Onsite Inventory: Communications Equipment (In use)</b>						
Type	Assigned to	Call Sign or Phone Number	Primary Network or Frequency	Brand and Model (Year, If Available)	Charger or Storage Location	Op Status
Hand-held Radios	Fire Dept: Company Officer			Johnson (20)	Bldg 1742	Operable
	"			GE (15)	NAS Fire Station	Operable
	Environmental Office			Motorola	Bldg 257	Operable
	Warehouse			HT-1000	Bldg 257	Operable
	Haz Waste Manager				Bldg 257	Operable
	Handlers (4 Each)				Bldg 257	Operable
Car/Truck Radios	All Fire Vehicles			Johnson		
Base Station Radios	Fire Station		Corpus	Motorola	Fire Station	Operable
Cellular Phones	Fire Chief	(512) 850-0619	NA	FUJITSU Commander Serial 82BDD29D	Fire Station	Operable
Other:						
Point of contact: Environmental Manager Day Phone: (512) 939-3776 24-Hour Phone: (512) 939-2383						
Comments: Fire Department Has 21 Additional Radios in Use.						
Additional Note: It is not known if NAS Corpus Christi maintains any additional stored communications equipment.						
<b>WARNING: ONLY "INTRINSICALLY SAFE" HAND-HELD RADIOS AND RECHARGEABLE BATTERY PACKS SHOULD BE USED AT OIL SPILLS. A radio is "intrinsically safe" only if BOTH the radio and battery pack are "intrinsically safe."</b>						
This inventory table functions both as an Onsite Inventory and as part of the Communications Plan.						
"Intrinsically safe" Motorola hand-held radios and battery packs are marked with green dots on the back, at the junction of the radio body and its battery pack; if BOTH dots are not present, the radio is not "intrinsically safe."						

Last updated: JANUARY 1995

Table ERAP F.5 Onsite Inventory: Fire Fighting Equipment						
Equipment	How Many	Type	Brand and Model	Year	Storage Location	Op Status
Fixed Foam System	1	FOAM (AFFF)	Not obtained		Fuel Farm: Tanks and Fuel Stand	Charged
Other Fire Trucks	8	Crash Rescue	Not obtained		Fire Department	Operable
	3	Fire Trucks	1,000 gal/min		Fire Department	Operable
	1	Hook and Ladder			Fire Department	Operable
Other:	2	Pump Stations	Pumping Facilities: North: 2,500 gpm 1,000 gpm 3,600 gpm 3,000 gpm 3,660 gpm  South: 3,600 gpm 1,500 gpm			
	2	Water Supplies	UST: 2.0 million gallons  Elevated tank: 500,000 gallons			
Point of Contact: <b>Environmental Manager</b> Day Phone: (512) 939-3776 24-Hour Phone: (512) 939-2383 <b>Fire Department</b> Day 24-Hour Phone: (512) 939-5333						
Comments: 12 Structural specialists, 6 crash specialists, and 1 supervisor on duty 24 hours/day.						

Last updated: JANUARY 1995

Table ERAP F.6 Onsite Inventory: Personal Protective Equipment								
Gear	Level of Protection				How Many	Storage Location	Op Status	
	A	B	C	D				
SCBA Respirator	X				12	Bldg 259		
SAR Respirator W/Escapes SCBA	X							
Moon Suit	X							
Inner Chemical-Resistant Gloves	X							
Chemical-Resistant Boots/Shoes	X				11 Env ** Note	Personal Assigned item		
Hard Hat	X				11	Personal Assigned item; Bldg 259		
Chemical-Resistant Clothing		X			2 Env 25 F.D.	Bldg 259		
Outer Chemical-resistant Gloves		X			24	Bldg 259		
Full-Face Canister Respirator			X		11	Personal Assigned Item Building 259		
Safety Goggles				X	20	Bldg 259		
Other:	X				6 Chemtex Suites	Fire Department	Operable	
Other:								
Point of Contact: Day Phone: 24-Hour Phone								
Comments: Note: The Fire Department has a completely outfitted HAZMAT Truck with an extensive inventory; see following lists following this page.								
Purchase of many of these items is ongoing; stocks are replenished as needed, so year of purchase information is unavailable.								
Level A Protection:		Level B Protection:		Level C Protection:		Level D Protection:		
respiratory	max	respiratory	max	respiratory	medium	respiratory	none	
eye	max	eye	max	eye	max	eye	medium	
skin	max	skin	medium	skin	medium	skin	minimal	

Last updated: JANUARY 1996

**Table ERAP F.7: Fire Department HazMat Inventory**

**Note:** NAS Corpus Christi's Fire Department's HazMat Inventory List follows this page. This list should be verified periodically.

**Note:** List of 3/31/94 consists of five pages.

HAZMAT INVENTORY LIST

## COMPARTMENT # 1

## TOP SHELF:

- 1 - Wet / Dry Vacuum Cleaner w/ attachments
- 2 - 50' sections water hose
- 3 - Decon kiddie pools 50" diameter x 9" high
- 1 - Black & Decker saw in black box
- 1 - Decon Valve (2 1/2" cap with faucet welded on to get water from truck to decon area.)
- 1 - Box miscellaneous valves and pipe connections
- 3 - Empty 5 gallon buckets for decontamination
- 3 - Decon brushes and handles (blue and white)

## Bottom shelf:

- 1 - 5 gallon bucket Plug N Dike
- 4 - Plug N Dike jars (ready mixed) small
- 3 - Pig Putty Tubes (small)
- 1 - Pipe Patch Kit (black box)
- 1 - Hazmat Response Kit Series "AE" (for plugging & patching drums)
- 1 - Hazmat Response Kit Series "C-1" (for plugging pipes)
- 1 - Aluminum Plate 1 1/2" x 7"
- 2 - Bags Particulate (expands when contacts spilled product)
- 3 - Large Pipe Patch Clamps
- 6 - Small absorbent socks (white)
- 1 - Spool Cotton Rope - 1/2" diameter 600'
- 1 - Spool Nylon Rope - 1/2" diameter
- 1 - Spool Manila Rope - 3/8" diameter 600'

## COMPARTMENT # 2

## TOP SHELF:

- 1 - Hand operated chemical pump
- 1 - Small hand axe (with leather cover)
- 1 - Large axe
- 1 - Small bolt cutters (blue and red handle)
- 1 - Large bolt cutters (green/black)
- 1 - Sledge Hammer (yellow head)
- 2 - Brass Sledge Hammers (Ampco Co.)
- 1 - Crash axe (blue head / black handle)
- 1 - Box Brass tools (Ampco) - 4 double box end wrenches, 10" crescent wrench, wire brush, slipjoint pliers, claw hammer, scraper (putty knife), small knife, phillips screwdriver, pliers, pry bar, and 14" pipe wrench.
- 1 - Aluminum Drum Dolly
- 1 - Grey tool box - 3/8" drive socket set
- 1 - Grey tool box - 1/2" drive socket set
- 3 - plastic dust pans

## BOTTOM SHELF:

- 2 - Boxes large plastic bags
- 1 - Box small plastic bags
- 1 - Plastic drip pan
- Bags absorbent material (speedy dry)



# HAZMAT TRUCK INVENTORY LIST (CONTINUED)

## COMPARTMENT # 3

### TOP SHELF:

- 1 - Sealed Pack (silver packaging) with 3 white coveralls
- 1 - Sealed Pack (silver packaging) with 3 white coveralls
- 1 - Sealed Pack (silver packaging) with 2 white coveralls
- 10 - Durafab Coveralls (large) yellow - no hood, boots, or gloves attached
- 9 - Durafab Coveralls (X-Large) yellow - no hood, boots, or gloves attached
- 1 - Durafab suit (white) - SCBA to be worn inside suit
- 3 - Flash Covers (2 XL and 1 large) Fyrepel Approach Garment  
Approximately 7 oz aluminized 60Z Kevlar / 40Z PBI  
(2 XL are complete / 1 Large missing one foot cover)
- 1 - Chemrel Level B-1 Suit
- 3 - Tyvek Suits (with hood and booties for LEVEL B or C)
- 11 - Saranex Suits (XL - white with hood and booties attached)
- 1 - Box of thin wipes
- 2 - 50' garden hoses (grey - behind suits on top shelf)

### BOTTOM SHELF:

- 25 - Tyvek Suits (White XL with hood and booties) in sealed box
- 6 - Chemtex Suits / rubber suits with hood (green 4 LARGE / 2 MED)  
Polyamide 20Z / PVC 80Z Oil/Grease/Acid Proof  
Bata Shoe Co., Inc. / Industrial Products  
Belcamp, Mo 21017 1-800-372-2282
- 10 - Plastic drop cloths - 9' X 12'
- 21 - pairs disposable boots (yellow /Large) style 2513  
Salem, Oregon Phone- 503-393-4936 FAX 503-393-0967
- 6 - pair Toxicological gloves (for toxicological agents) 2 Large; 4 XL  
test date - 9/90 (3 pairs in boxes/ 3 pairs loose)
- 1 - pair Edmont Scorpio gloves (green - Medium)
- 3 - pair Industrial gloves (Acid and Alkali resistant)
- 3 - boxes disposable gloves (LARGE)
- 1 - box disposable gloves (XL)
- 1 - box disposable gloves (MEDIUM)
- 39 - Silver Shield Glove covers 18 pair medium; 21 pair large
- 3 - pair disposable foot covers (medium - clear) inspected; tested 8/92
- 2 - Rubber coated laboratory aprons  
Southeastern Regional Workshops Inc. - 401 Monroe Avenue  
Ronceverte, W. Virginia NSN # 8415-00-634-5023  
Content # GS-015-08343 LAB-SAFE
- 1 - box small plastic bags
- 3 - rolls green duct tape (to tape up suits)
- 2 - Flashlights with cones for signalling

# HAZMAT TRUCK INVENTORY LIST (CONTINUED)

## COMPARTMENT # 4

- Cascade System - to fill SCBA bottles
- 4 - Cylinder covers for the air banks
- 6 - Spare SCBA bottles (4500 psi)

## COMPARTMENT # 5

- 2 - Large plastic shovels (green)
- 2 - Metal shovels (black with red handle)
- 3 - Heavy duty large straw bristle brooms (for speedy dry)
- 1 - Regular kitchen straw broom
- 4 - Wide brooms (small green and brown bristles)

## COMPARTMENT # 6

- 1 - Box cool packs (18 count)
- 1 - Box cooling vests (4count)
- 1 - Wooden backboard
- 1 - Aluminum Folding Backboard with straps
- 1 - Miller board
- 10 - Small traffic cones
- 2 - Wide brooms (small green and brown bristles)

## COMPARTMENT # 7

- 9 - LEVEL A Suits Lifeguard (6 large / 3 medium) Butyl Rubber
- 1 - Ranger Firemaster Boots w/ steel toe (size 13)
- 4 - Firewalker Boots "Ranger" w/ steel toe (sizes 10, 11 1/2, 12, 12)
- 2 - Miller Boards

## COMPARTMENT # 8

- 2 - Packages "Pig Mat" absorbent mat (100 ct / 16 1/2" x 20")
- 1 - Package Sorbent Pads - white ( 100 ct / 18" x 18") non- aggressive for hydro-carbon
- 3 - Bags Sodium Bicarbonate Industrial (50 lb bag)
- 3 - Absorbent pillows (non - aggressive)
- 1 - Drum thief and sampling kit (blue container)



# HAZMAT TRUCK INVENTORY LIST (CONTINUED)

## COMPARTMENT # 9

- 1 - SO2 (Sulfur Dioxide) Emergency Repair Kit (1 ton Cylinders)
- 1 - Chlorine Emergency Repair Kit (for 1 ton cylinder)
- 1 - Chlorine Emergency Repair Kit (for 150 lb cylinder)
- 4 - Booms (8" x 10' long) 1 in each plastic bag
- 1 - Sock (pink) 6" x 10' long
- 2 - Bags of absorbent flake (pink)
- 13 - Socks - 3" x 4' long (pink) in 1 bag
- 8 - Socks - 3" x 4' long (pink) in 1 bag
- 10 - Absorbent Pillows approximately 18" x 17" (pink)

## COMPARTMENT # 10

HAZMAT TRUCK Generator and switch box (Cummins Generator) with ground cable  
and ground set tool Volts - 120 / 240 Amps - 25  
1 - 1 to 4 outlet electric adapter

## SMALL COMPARTMENT (Rear of Truck)

-EMPTY-

## INSIDE TRUCK - GLASS COMP. TOWARD CAB

- 20 - "Emergency Personnel" vests
- 9 - "Hazmat Team" vests
- 2 - "Liason Officer" vests
- 2 - "Information Officer" vests
- 2 - "Incident Commander" vests
- 2 - "Safety Officer" vests
- 1 - Hazmat Kit - Draeger Gas Detector (orange box)
- 1 - Box Draeger Tubes
- 1 - Blue "Command Post" marker
- Several maps and ICS chart

## TOP SHELF: INSIDE TRUCK - GLASS COMP. (LEFT REAR)

- 1 - First Aid Kit (red & white box)
- 1 - First Aid Kit (olive colored box)
- 2 - Packages Kimberly Clark Kimtex Wipes
- 4 - Plastic Blankets (56" X 84")
- 1 - Package inspection tags (for use as ID tags)
- 1 - Stifneck extrication collar
- 6 - Scott Respirator Adapters for twin cartridges
- 3 - Pair Chemical Cartridges (for Chlorine, Hydrogen Chloride, Sulfur Dioxide, Formaldehyde, Chlorine Dioxide, Dusts, Fumes, Mists, Radionuclides, Radon Daughters, and for escape from Hydrogen Sulfide.
- 3 - Pair Chemical Cartridges for Ammonia, Methylamine, Dusts, Fumes, Mists, Radionuclides, and Radon Daughters.
- 2 - Pair Chemical Cartridges for Organic Vapors



**BOTTOM SHELF:**

- 1 - roll "Fire Scene Do Not Cross"
- 1 - roll " Caution " tape (small roll)
- 1 - roll "Hazardous Material Exposure Area"
- 1 - roll "Caution - Hazardous Material"
- 1 - roll "Security Line Do Not Cross"
- 10 - Yellow disposable bags
- 2 - New goggles (in boxes)
- 5 - Used goggles (1 has no strap)
- 2 - Squeegee spare rubbers
- 1 - Absorbent sock (blue)
- 2 - Tubes Spillyter Chemical Classifier for hazardous liquids
- 2 - Radios for communication systems on SCBA's
- 3 - Interface Cables for communication system

**INSIDE TRUCK ON SIDE SHELVES**

- 2 - Decontamination Pools (in box)
- 2 - Fyrepel Level A Suits (in yellow canisters)
- 2 - Interceptor Level A Suits (in boxes)
- 4 - Scott SCBA's 4.5 (1 hour air packs in cases)

**FRONT SHELF INSIDE ABOVE GLASS COMPARTMENT (TOWARD CAB)**

- 1 - Red tool Box (locked)
- 1 - Roll plastic sheeting 16' X 100' long
- 3 - MSDS books
- 1 - Book "Emergency Handling of Hazardous Materials"
- 1 - Book "Dangerous Properties Of Industrial Materials"
- 1 - Black binder "Oil Spill Control Plan N.A.S."
- 1 - Black binder " Hazardous Substance Spill Contingency Planning Manual"
- 1 - 1990 EMERGENCY RESPONSE GUIDEBOOK
- 2 - 1987 EMERGENCY RESPONSE GUIDEBOOKS
- 1 - NIOSH POCKET GUIDE TO CHEMICAL HAZARDS
- 1 - Firefighters Handbook Of Hazardous Materials



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Table ERAP F.8 Equipment Available from Nearby DoD Installations		
Topic		Installation 1
Name of Installation		NAVSTA Ingleside
24-hr Phone		(512) 813-3663
Location of Installation		Naval Station Ingleside
Response Time (hr)		Varies
Self-supporting Strike Teams Available	Booming (Boom-Anchors-Boats-Crew)	Available Equipment: Utility Boat Work Boat Platform Permanent Boom: 4,500' Class II Boom: 12,000' Boom Mooring System
	Skimming (Skimmer/Crew/Bladder)	See Comments
	Onshore Recovery (Vac Truck/Crew)	See Comments
	Shoreline Cleanup (Crew/Supervision/Equip)	See Comments
Agreement (Written, Informal, etc.)		CNATRA INST 5090.2 dts 08DEC92
Comments:		This information was obtained from CNATRA INSTRUCTION 5090.2 dtd 08 Dec 1992. All plan users should verify that this is the latest update/availability of equipment support.
Strike Team availability is stated in terms of the basic equipment (i.e., a booming Strike Team stated as "1,000 ft" would mean that 1,000 ft of boom and all necessary support was available).		

Last updated: JANUARY 1995

Table ERAP F.9 Equipment Available from Tier1 Contractors			
Topic		Contractor 1	Contractor 2
Name of Contractor		Corpus Christi Area Oil Spill Control Association	NAVSUPSALV
24-hr Phone		(512) 882-2656	(703) 607-2758
Nature of Contractor (Private Company, Co-op, Navy, etc.)		Co-op	Navy
Location of Equipment		See comments	Williamsburg, VA
Response Time (hr)		See comments	Being developed
USCG OSRO Information	Level Rated	B	Not rated
	Op Environments Rated	R/C I/N	Offshore/Open Ocean
	Containment Boom (ft)	R/C or I/C: 12,000 ft	42" (1980 x5)
	Protective Boom (ft)	See Comments	0
	Oil Recovery (bbl/day)	1,250	829,206
	Temporary Storage (bbl)	2,500	894,000
Strike Teams Available	Booming (Boom-Anchors-Boats-Crew)	See comments	31 Boom Mooring System 8 Boom Handling Boats (24 ft 260 hp Diesel) 2 Boom Tending Boats (19 & 23 ft inflatable) 4 Boom Tending Boats (18 ft Rigid Hull)
	Skimming (Skimmer/Crew/Bladder)	See comments	10 Skimmer Vsl Sys. (36' Aluminum Hull) 1 Skimmer System (Sorbent Belt VOSS) 2 Skimmer System (Screw Pump VOSS) 1 Skimmer, Sorbent Rope Mop (36 ft)
	Onshore Recovery (Vac Truck/Crew)	See comments	0
	Shoreline Cleanup (Crew/Supervision/Equip)	See comments	0
Contract	Number	See FRP Appendix B	See FRP Appendix B
	Nature (BOA, Co-op Agreement, etc.)	Co-op	Navy
	Response Mandatory?	Yes	Yes
Comments:		For details of Response Capabilities see Table ERAP F.10 and see FRP Appendix B for contract.	See FRP Appendix B for details of equipment and response capability (will be provided in future revision).
<p>The USCG Oil Pollution Act of 1990 Update issues include a list of currently rated OSROs. For USCG-rated OSROs, this table gives the contractor's level (A → E) and operating environments, then it lists the MINIMUM capacities of the contractor's strike teams in this installation's operating environment (taken from Table ERAP F.12, OSRO Capability Minimums).</p> <p>R/C = rivers/canals I/N = inland/nearshore (coastal) GL = Great Lakes</p>			

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Table ERAP F.10 Equipment Available From Tier 2 Contractors			
Topic		Contractor 1	Contractor 2
Name of Contractor		Corpus Christi Area Oil Spill Control Association	NAVSUPSALV
24-hr Phone		(512) 882-2656	(703) 607-2758
Nature of Contractor (Private Company, Co-op, Navy, etc.)		Co-op	Navy
Location of Equipment		See comments	Williamsburg, VA
Response Time (hr)		See comments	Being determined
USCG OSRO Information	Level Rated	B	Not rated
	Op Environments Rated	R/C I/N	Offshore/Open Ocean
	Containment Boom (ft)	R/C or I/C: 12,000 ft	42' (1980 x5)
	Protective Boom (ft)	See comments	0
	Oil Recovery (bbl/day)	1,250	829,206
	Temporary Storage (bbl)	2,500	894,000
Strike Teams Available	Booming (Boom-Anchors-Boats-Crew)	See comments	31 Boom Mooring system 8 Boom Handling Boats (24 ft 260 hp Diesel) 2 Boom Tending Boats (19 & 23 ft inflatable) 4 Boom Tending Boats (18 ft Rigid Hull)
	Skimming (Skimmer/Crew/Bladder)	See comments	10 Skimmer Vsl Sys. (36' Aluminum Hull) 1 Skimmer System (Sorbent Belt VOSS) 2 Skimmer System (Screw Pump VOSS) 1 Skimmer, Sorbent Rope Mop (36 ft)
	Onshore Recovery (Vac Truck/Crew)	See comments	0
	Shoreline Cleanup (Crew/Supervision/Equip)	See comments	0
Contract	Number	See FRP Appendix B	See FRP Appendix B
	Nature (BOA, Co-op Agreement, etc.)	Co-op	Navy
	Response Mandatory?	Yes	Yes
Comments:		For details of Response Capabilities see Table ERAP F.10 and see FRP Appendix B for contract.	See FRP Appendix B for details of equipment and response capabilities (will be provided in future revision when available).
<p>The USCG Oil Pollution Act of 1990 Update issues include a list of currently rated OSROs. For USCG-rated OSROs, this table gives the contractor's level (A → E) and operating environments, then it lists the MINIMUM capacities of the contractor's strike teams in this installation's operating environment (taken from Table ERAP F.12, OSRO Capability Minimums).</p> <p>R/C = rivers/canals I/N = inland/nearshore (coastal) GL = Great Lakes</p>			

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Table ERAP F.11 Equipment Available From Tier 3 Contractors			
Topic		Contractor 1	Contractor 2
Name of Contractor		NAVSUPSALV	
24-hr Phone		(703) 607-2758	
Nature of Contractor (Private Company, Co-op, Navy, etc.)		Navy	
Location of Equipment		Williamsburg, VA	
Response Time (hr)		11.5	
Uscg Osro Information	Level Rated	Not rated	
	Op Environments Rated	Offshore / Open Ocean	
	Containment Boom (ft)	42" (1980 x 5)	
	Protective Boom (ft)	0	
	Oil Recovery (bbl/day)	829,206	
	Temporary Storage (bbl)	894,000	
Strike Teams Available	Booming (Boom-Anchors-Boats-Crew)	31 Boom Mooring system 8 Boom Handling Boats (24 ft 260 hp Diesel) 2 Boom Tending Boats (19 & 23 ft inflatable) 4 Boom Tending Boats (18 ft Rigid Hull)	
	Skimming (Skimmer/Crew/Bladder)	10 Skimmer Vsl Sys. (36' Aluminum Hull) 1 Skimmer System (Sorbent Belt VOSS) 2 Skimmer System (Screw Pump VOSS) 1 Skimmer, Sorbent Rope Mop (36 ft)	
	Onshore Recovery (Vac Truck/Crew)	0	
	Shoreline Cleanup (Crew/Supervision/Equip)	0	
Contract	Number	See FRP Appendix B	
	Nature (BOA, Co-op Agreement, Etc.)	Navy	
	Response Mandatory?	Yes	
Comments:		See FRP Appendix B for details of equipment and response capability (will be provided in a future revision).	
<p><b>The USCG Oil Pollution Act of 1990 Update</b> issues include a list of currently rated OSROs. For USCG-rated OSROs, this table gives the contractor's level (A → E) and operating environments, then it lists the MINIMUM capacities of the contractor's strike teams in this installation's operating environment (taken from table 2-6, OSRO Capability Minimums).</p> <p>R/C = rivers/canals I/N = inland/nearshore (coastal) GL = Great Lakes</p>			

Last updated: JANUARY 1995

**Table ERAP F.12  
OSRO Capability Minimums**

Operating Environment	Class (Level)	Containment Boom	Protective Boom	Oil Recovery Capacity (De-rated)	Temporary Storage Capacity
Inland or Nearshore (inland or coastal)	A	2,000 ft	6,000 ft	50 bbl/day	100 bbl
	B	6,000 ft	6,000 ft	1,250 bbl/day	2,500 bbl
	C	12,000 ft	12,000 ft	10,000 bbl/day	20,000 bbl
	D	18,000 ft	18,000 ft	20,000 bbl/day	40,000 bbl
	E	24,000 ft	24,000 ft	40,000 bbl/day	80,000 bbl
River or Canal	A	2,000 ft	2,000 ft	50 bbl/day	100 bbl
	B	4,000 ft	4,000 ft	1,250 bbl/day	2,500 bbl
	C	4,000 ft	10,000 ft	1,500 bbl/day	3,000 bbl
	D	4,000 ft	16,000 ft	3,000 bbl/day	6,000 bbl
	E	4,000 ft	22,000 ft	6,000 bbl/day	12,000 bbl
Great Lakes (and their connecting waters, tributaries, and adjacent ports)	A	2,000 ft	6,000 ft	50 bbl/day	100 bbl
	B	6,000 ft	6,000 ft	1,250 bbl/day	2,500 bbl
	C	12,000 ft	12,000 ft	5,000 bbl/day	10,000 bbl
	D	18,000 ft	18,000 ft	10,000 bbl/day	20,000 bbl
	E	24,000 ft	24,000 ft	20,000 bbl/day	40,000 bbl

Source: USCG Navigation and Vessel Inspection Circular (NVIC) No. 12-92.

The USCG Oil Pollution Act of 1990 Update issues include a list of currently rated OSROs.

The Navy has no facilities operating in an offshore environment (i.e., over 12 nm from land), so the USCG "Offshore and Open Ocean Environments" category is not presented.

Last updated: JANUARY 1995

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## **TAB G — SENSITIVE AREAS: PROTECTION OF SENSITIVE/ECONOMIC AREAS**

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## **TAB G — SENSITIVE AREAS: PROTECTION OF SENSITIVE/ECONOMIC AREAS**

### **1.0 INTRODUCTION**

Information presented in Tab G has been prepared to coordinate with ***SOUTH TEXAS COASTAL ZONE AREA CONTINGENCY PLAN*** (ACP). Table ERAP G.1 ranks sensitive areas and areas of economic importance as established by the ACP. See FRP, Tab 3, Section 3.1 for more details on the sensitive areas, their vulnerability to oil spills, and specific species data. When the ACP establishes the methods and booming requirements to protect these areas, they will be promulgated in a future revision.

#### **1.1 Prioritized List Of Environmentally And Economically Sensitive Areas**

Table ERAP G.1 lists the sensitive areas within the facility's worst-case discharge planning distance. The "ERAP-Map" column depicts the location of the sensitive area on the Emergency Response Action Plan Maps in Tab J. The "ARP-Map" column shows the location of the sensitive area on the ACP sensitive area maps.

The information contained herein is intended to only be used for the initial or emergency response phase of the cleanup. The sensitivity has been defined and ranked by the Area Committee and cannot be changed. For example, an area listed as a high priority cannot be changed to a medium or low priority by the responders. The sensitive area to be protected may vary depending on spill detection time, tide, current, weather, personnel available onsite to respond, etc. Constant priority level surveillance and analysis must be made in order to maximize the protection of identified sensitive areas and to make intelligent response decisions.

## 1.2 Identification Of Vulnerable Areas And Risk Of Impact

This section has been prepared to coordinate with *South Texas Coastal Zone Area Contingency Plan (ACP)*. The priorities have been placed on the areas according to the Environmental Sensitivity Index (ESI) maps, field surveys and shoreline prioritization standards that have been adopted by the U.S. scientific community. (See "Protection Priority Criteria," below, Table ERAP G.0 in this Tab).

Table ERAP G.0 Protection Priority Criteria			
The following list is a protection priority criteria of which the ACP priority for protection decisions are based.			
1* Polygons are red	2 - Polygons are purple	3 - Polygons are green	4 - Polygons are blue
<p>(1*): extremely important (1): very important</p> <p>These are areas containing extremely important and sensitive habitat for threatened and endangered species. These areas typically possess documentation of occupancy by significant numbers of federally listed species and are currently utilized by those species. It is utmost important to realize that other areas, which do not have the 1* designation may, in fact, also contain high numbers of federally listed species, however documentation currently does not exist. This compilation effort is based on best available information, and new information, particularly concerning threatened and endangered species, may become available at any time. Furthermore, polygons not designated by a 1* may contain habitat similar in quality to those polygons for which habitat and documentation exist (1*).</p>	<p>(2): contain high quality habitat</p> <p>These are areas containing very important habitat for threatened and endangered species (although documentation of occupancy is less than that in polygons designated 1*), high-priority waterbird colonies, significant avian use (usually greater than 10,000 shorebirds, wading birds, gulls, terns, and waterfowl), very high quality marshes, algal flats, and other important resources.</p>	<p>(3): contain good quality habitat</p> <p>These are areas of high-quality habitat for avian species (up to 10,000 shorebirds, wading birds, gulls, terns, and waterfowl), candidate species, moderate priority coastal waterbird colonies, high-quality marshes, oyster reefs, and dolphin use areas.</p>	<p>These are areas of good quality habitat for birds and fishery species; they contain good quality fringe marshes and typically have good avian use (up to 1,000 birds), candidate plant and animal species, migratory songbird fallout areas, and low-priority coastal waterbird colonies.</p>

**Note:** The ACP further states: "Fish and Wildlife agency concerns are intensified with certain areas located within the bay systems at specific times of the year due to larval recruitment, migratory bird use, and other seasonally related phenomena. Should an oil spill occur within the mapped areas, state and federal resource agencies should be contacted immediately to assist in determining the direction the spill should be routed and in other aspects of the cleanup effort.

### 1.3 Resources At Risk

<b>Table ERAP G.1</b> <b>List of ACP Sensitive Areas and Areas of Economic Importance</b>			
Protection Sites			
Nueces County, Texas, Map (1980) ** See Note Below			
Priority Rating	Reference Nueces Map Polygon	Location Description	Ecological Significance
1 *	A	Gulf side of Mustang Island	Greater than 100 piping plover, peregrine falcon (threatened and endangered species), snowy plover (candidate species), polygon partially encompasses Mustang Island State Park.
1 *	C	Shoreline in Galleon Bay on Padre Island	Greater than 100 piping plover, peregrine falcon, snowy plover, reddish egret (candidate species), 10,000+ shorebirds, wading birds, gulls, terns, and waterfowl, extensive habitat modifications, algal flats, low priority rookery, some strands of smooth cordgrass, moderate strands of emergent marsh, seagrasses, some oysters
1 *	D	North of Galleon Bay on Padre Island, NE of JFK Causeway	Greater than 50 piping plover, snowy plover, polygon partially encompasses Mustang Island State Park, oyster clumps and reefs, algal flats, seagrasses, sparse to moderate strands of smooth cordgrass, and other emergent marsh species along shorelines.
1 *	E	Corpus Christi Bay side of Mustang Island	Greater than 50 piping plover, snowy plover, algal flats
1	G	Western side of Oso Creek	Snowy plover
1	I	N & S of JFK Causeway	Peregrine falcon, high-priority rookery, algal flats, 20,000 water fowl, seagrasses along shorelines
1	J	N & S of JFK Causeway	100+ reddish egret, low-priority rookery, 10,000+ shorebirds wading birds, gulls, and terns, 20,000+ waterfowl, algal flats, extensive seagrasses along shorelines, smooth cordgrass marsh along shorelines
1	L	Southern side of Ward Island	Piping plover, peregrine falcon, snowy plover, reddish egret, 10,000+ shorebirds, wading birds, gulls, terns, and waterfowl, algal flats, smooth cordgrass marsh, other emergent marsh species, moderate seagrasses throughout polygon
1	M	West side of Mustang Island	Piping plover, peregrine falcon, snowy plover, 100+ reddish egret, 10,000+ shorebirds, wading birds, gulls, terns, and waterfowl, some clumps of oysters, algal flats, seagrasses, dense smooth cordgrass along shorelines, other emergent marsh species
1	O	Near Ward Island	Piping plover, snowy plover, 100 reddish egret, 20,000 water fowl, 10,000 shorebirds, wading birds, gulls, and terns, seagrasses, emergent marsh along shorelines.

Table ERAP G.1 List of ACP Sensitive Areas and Areas of Economic Importance			
Protection Sites			
Nueces County, Texas, Map (1980) ** See Note Below			
Priority Rating	Reference Nueces Map Polygon	Location Description	Ecological Significance
1	Q	West side of Mustang Island, Mustang Island State Park	Piping plover, peregrine falcon, snowy plover, 100 reddish egret, Mustang Island State Park, 20,000 waterfowl, 10,000+ shorebirds, wading birds, gulls, and terns, algal flats, some oyster clumps at the north end of the polygon, dense seagrasses in the southern end of the polygon, bands of seagrasses along shorelines, smooth cordgrass marsh along shorelines, other emergent marsh species.
1	R	Laguna Madre along JFK Causeway	Peregrine falcon, 100+ reddish egret, 10,000+ waterfowl, 10,000+ shorebirds, gulls, and terns, dense seagrasses throughout polygon
1	S	Inland side of Padre Island south of Galleon Bay	Piping plover, snowy plover, algal flats
1	U	North of NAS Corpus Christi in Corpus Christi Bay	Oyster reefs
2	V	Oso Creek along NW boundary of NAS Corpus Christi	Moderate seagrasses, some emergent marsh along shorelines, algal flats

**\*\* Note:** All references are from the Nueces County Map (1980) and the Nueces County Map (1969) as annotated by the Texas Water Commission is provided for clarification (See FRP, Part J) However, there is no stipulation as to the types of deflection boom or barrier booming that should be put in place. These ACP-approved methods will be published in a future revision to this document as they develop.

## 1.4 Protection Strategies

Table ERAP G.2 for ERAP Map Number Nueces County Map, lists possible protection strategies since the ACP does not list steps to be taken to protect the areas in Table ERAP G.1. The "Comments" box is to be used to update site information and note unusual circumstances that responders should be aware of (i.e., poisonous snakes, turtle nesting sites, etc.)

Table ERAP G.2 Protection Strategies		
Protection Site	Protection Strategy	Nearest Oil Collection Point
<b>Nueces County: Gulf Side of Mustang Island</b>		
Gulf Side of Mustang Island (A)	Deflect oil to section of beach to be used for collection area.	To be determined
<b>Access To Site:</b> By boat		
<b>Comments:</b> Greater than 100 piping plover, peregrine falcon (threatened and endangered species), snowy plover (candidate species), polygon partially encompasses Mustang Island State Park.		
<b>Nueces County: Galleon Bay</b>		
Shoreline in Galleon Bay on Padre Island (C)	Deflect oil to section of beach to be used for collection area.	To be determined
<b>Access to Site:</b> By boat or vehicle		
<b>Comments:</b> Greater than 100 piping plover, peregrine falcon, snowy plover, reddish egret (candidate species), 10,000 + shorebirds, wading birds, gulls, terns, and waterfowl, extensive habitat modifications, algal flats, low-priority rookery, some strands of smooth cordgrass, moderate strands of emergent marsh, seagrasses, some oysters. Salt marsh/Archaeological Sites, Sea oats, bird foraging habitat.		
<b>Nueces County: North Galleon Bay</b>		
North of Galleon Bay on Padre Island, NE of JFK Causeway (D)	Deflect oil to sandy beach for cleanup.	Nearest at base of JFK Causeway
<b>Access to Site:</b> By vehicle or boat		
<b>Comments:</b> Greater than 50 piping plover, snowy plover, polygon partially encompasses Mustang Island State Park, oyster clumps and reefs, algal flats, seagrasses, sparse to moderate strands of smooth cordgrass and other emergent marsh species along shorelines.		

Table ERAP G.2 Protection Strategies		
Protection Site	Protection Strategy	Nearest Oil Collection Point
<b>Nueces County: Corpus Christi Bay: Mustang Island</b>		
Corpus Christi Bay side of Mustang Island (E)	Deflect oil away from area.	To be determined
<b>Access to Site:</b> By boat		
<b>Comments:</b> Greater than 50 piping plover, snowy plover, algal flats rookeries, wintering grounds.		
<b>Nueces Bay: Oso Creek</b>		
Western Side of Oso Creek (G)	Boom to deflect oil to collection area.	To be determined
<b>Access to Site:</b> By boat or vehicle		
<b>Comments:</b> Snowy plover		
<b>Nueces County: N&amp;S JFK Causeway</b>		
N & S of JFK Causeway (I)	Deploy boom to keep oil from migrating with current.	To be determined
<b>Access to Site:</b> By boat or vehicle		
<b>Comments:</b> Peregrine falcon, high-priority rookery, algal flats, 20,000 water fowl, seagrasses along shorelines		
<b>N&amp;S JFK Causeway</b>		
N & S of JFK Causeway (J)	Deploy boom to protect rookery.	Near JFK Causeway/to be determined
<b>Access to Site:</b> By boat		
<b>Comments:</b> 100+ reddish egret, low-priority rookery, 10,000+ shorebirds, wading birds, gulls, and terns, 20,000+ waterfowl, algal flats, extensive seagrasses along shorelines, smooth cordgrass marsh along shorelines		
<b>Nueces County: Southside Ward Island</b>		
Southern side of Ward Island (L)	Deflect oil away from area.	To be determined
<b>Access to Site:</b> By boat		
<b>Comments:</b> Piping plover, peregrine falcon, snowy plover, reddish egret, 10,000+ shorebirds, wading birds, gulls, terns, and waterfowl, algal flats, smooth cordgrass marsh, other emergent marsh species, moderate seagrasses throughout polygon		

Table ERAP G.2 Protection Strategies		
Protection Site	Protection Strategy	Nearest Oil Collection Point
<b>Nueces County: West Side Mustang Island</b>		
West side of Mustang Island (M)	Place deflection boom to protect shoreline.	To be determined
<b>Access to Site:</b> By boat		
<b>Comments:</b> Piping plover, peregrine falcon, snowy plover, 100+ reddish egret, 10,000+ shorebirds, wading birds, gulls, terns, and waterfowl, some clumps of oysters, algal flats, seagrasses, dense smooth cordgrass along shorelines, other emergent marsh species		
<b>Nueces County: Near Ward Island</b>		
Near Ward Island (O)	Boom to protect shoreline.	To be determined
<b>Access to Site:</b> By boat or vehicle.		
<b>Comments:</b> Piping plover, snowy plover, 100 reddish egret, 20,000 water fowl, 10,000 shorebirds, wading birds, gulls, and terns, seagrasses, emergent marsh along shorelines.		
<b>Nueces County: West Side of Mustang Island</b>		
West side of Mustang Island, Mustang Island State Park (Q)	Deflect oil to collection point.	To be determined
<b>Access to Site:</b> By boat and vehicle. Launch boat and boom at A1A Bridge.		
<b>Comments:</b> Piping plover, peregrine falcon, snowy plover, 100 reddish egret, Mustang Island State Park, 20,000 waterfowl, 10,000+ shorebirds, wading birds, gulls, and terns, algal flats, some oyster clumps at the north end of the polygon, dense seagrasses in the southern end of the polygon, bands of seagrasses along shorelines, smooth cordgrass marsh along shorelines, other emergent marsh species.		
<b>Nueces County: Laguna Madre along JFK Causeway</b>		
Laguna Madre along JFK Causeway (R)	Deploy diversion boom to try to keep oil out of Laguan Madre.	To be determined
<b>Access to Site:</b> By boat		
<b>Comments:</b> Peregrine falcon, 100+ reddish egret, 10,000+ waterfowl, 10,000+ shorebirds, gulls, and terns, dense seagrasses throughout polygon		
<b>Nueces County: Padre Island</b>		
Inland side of Padre Island south of Galleon Bay (S)	Deflection boom to protect shoreline, move oil to collection point	To be determined
<b>Access to Site:</b> By boat		
<b>Comments:</b> Piping plover, snowy plover, algal flats		

Table ERAP G.2 Protection Strategies		
Protection Site	Protection Strategy	Nearest Oil Collection Point
<b>Nueces County: North of NAS Corpus Christi</b>		
North of NAS Corpus Christi in Corpus Christi Bay (U)	Deflection boom to move oil away from reefs.	To be determined
<b>Access to Site:</b> By boat		
<b>Comments:</b> Oyster reefs		
<b>Nueces County: Oso Creek</b>		
Oso Creek along NW boundary of Nas Corpus Christi (V)	Deploy boom to close off channel.	To be determined
<b>Access to Site:</b> By boat and vehicle		
<b>Comments:</b> Moderate seagrasses, some emergent marsh along shorelines, algal flats		

## 1.5 Wildlife/Resources to Protect

Table ERAP G.3 depicts general wildlife information in the zone of impact. See FRP Tab 3 for more detailed information on wildlife in the area.

Table ERAP G.3 Wildlife Present			
Wildlife	Type	Season	Reference*
Birds	Piping plovers, peregrine falcons, diving birds, shorebirds and wading birds	Feeding, all Seasons.	Table FRP 3.11
	Wading birds	Nesting, spring and summer.	
Fish	Finfish and crustaceans/shellfish	Feeding, all seasons Nesting all seasons.	Tables FRP 3.13
Mammals	Unknown	All seasons.	Table FRP 3.12
Reptiles & Amphibians	Turtles and alligators possible	Feeding all seasons. Nesting Spr, Su.	Table FRP 3.12
Endangered Species	All types	All seasons.	Table FRP 3.15
<b>Note:</b> *The reference tables in the FRP, Tab 3, Section 3.2.4, Vulnerability Analysis will supply the responder with more details on the wildlife in the area and their vulnerabilities to oil. FRP Tab 3, Section 3.2.4 is primarily for use after the emergency phase, but the responder can use this section to make better decisions during the changing dynamics of a spill.			

## 1.6 Equipment and Resources Needed for Implementing Protection Strategies for a Worst-case Discharge

NAS Corpus Christi has contracted CCAOSCA (a level B for rivers and canals and Level B for inland/nearshore OSRO) to respond to oil spills from NAS Corpus Christi, including a worst-case discharge. CCAOSCA will implement protection strategies as prescribed in the ACP and this plan. Additionally, NAVSUPSALV is a Tier 3 contractor for NAS Corpus Christi (see ERAP Tab F for listing of equipment capabilities).

CCAOSCA has been classified by the USCG as Class B for rivers and canals (**OSRO Capability Minimums: containment boom, 4,000 ft and protective boom, 4,000 ft**) and Class B for inland/nearshore (**OSRO capability minimums: containment boom, 6,000 ft and protective boom, 6,000 ft**) OSRO. Therefore, CCAOSCA possesses the required capability to implement the protection strategies detailed above and summarized in Table ERAP G.9. (NOTE (a) is in reference to OSRO Level B classification).

Table ERAP G.4 Minimum Equipment and Resources Required to Implement Protection Strategies					
Site Name	Equipment Requirement: Boom		Personnel Requirement	Facility Shortfall	
	Available (See Note a Above)	Required Suggestion		Equipment	Personnel
Gulf side of Mustang Island (A)	To be determined	Deflection	Team A: at least 1 utility boat and 3-4 people	Unknown	Unknown
Shoreline Galleon Bay (C)	To be determined	Deflection	Team B: at least 1 utility boat and 3-4 people	Unknown	Unknown
Galleon Bay (D)	To be determined	Deflection		Unknown	Unknown
Corpus Christi Bay (E)	To be determined	Deflection	Team C: at least 1 utility boat and 3-4 people	Unknown	Unknown
N&S JFK Causeway (I)	To be determined	Deflection	Team C	Unknown	Unknown
Oso Creek Western side (G)	To be determined	Deflection	Team E: at least 1 utility boat and 3-4 people	Unknown	Unknown
N&S JFK Causeway (J)	To be determined	Protection	Team D: at least 1 utility boat and 3-4 people	Unknown	Unknown
Southern side Ward Island (L)	To be determined	Deflection	Team E	Unknown	Unknown
West side of Mustang Island (M)	To be determined	Deflection	Team C	Unknown	Unknown

Table ERAP G.4 Minimum Equipment and Resources Required to Implement Protection Strategies						
Site Name	Equipment Requirement: Boom		Personnel Requirement	Facility Shortfall		
	Available (See Note a Above)	Required Suggestion		Equipment	Personnel	
Near Ward Island (O)	To be determined	Protection	Team D	Unknown	Unknown	
West side of Mustang Island (Q)	To be determined	Deflection	Team F: at least 1 utility boat and 3-4 people	Unknown	Unknown	
Laguan Madre along JFK Causeway (R)	To be determined	Protection/ Deflection	Team G: at least 1 utility boat and 3-4 people	Unknown	Unknown	
Inland side of Padre Island (S)	To be determined	Deflection	Team F	Unknown	Unknown	
North of NAS Corpus Christi (U)	To be determined	Deflection Protection	Team E	Unknown	Unknown	
Oso Creek (V)	To be determined	Protection		Unknown	Unknown	
Summary						
Equipment			Personnel			
	Available	Required	Shortfall	Available	Required	Shortfall
	River/Canal: 8,000 ft (Level B) & Inland / Nearshore: 12,000 ft	To be determined	Unknown	Unknown	21 +	Unknown

**Note:** The above suggested booming strategies are based roughly on the ACP for the Corpus Christi area, but may not fully take into account the rigorous environmental situation encountered at each specific site. Therefore, it is extremely important that NAS Corpus Christi work closely with CCAOSCA to develop "realistic" booming criteria and methods so that all resources available can be maximized and the correct number of personnel and boats utilized.

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## TAB H — DISPOSAL PLAN

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# TAB H — DISPOSAL PLAN

## 1.0 DISPOSAL PLAN

Table ERAP H.1 Temporary Storage Capacity					
Planning Size Category		Requirements		Planned Response	
		Amount (gal/day)	Time (hrs)	Equipment to Be Used To Satisfy Requirement	Source of Equipment To Be Used
Small		4,200	2	NAS Corpus Christi Tank 13-1 or 13-2 (400,000 gal)	NAS Tanks: Burn in Boiler
Medium		36,000	12	NAS Corpus Christi Tank 13-1 or 13-2 (400,000 gals)	NAS Tanks: Burn in Boiler
Worst Case	Tier 1	51880	12	See Note (a)	NAS Tanks 13-1 or 13-2 (Burn in Boiler) CCAOSCA
	Tier 2	86466	36	See Note (a)	NAS Tanks 13-1 or 13-2 (Burn in Boiler) CCAOSCA
	Tier 3	138,346	60	See Note (a)	NAS Tanks 13-1 or 13-2 (Burn in Boiler) CCAOSCA
<p>(a) Corpus Christi Area Oil Spill Control Association (CCAOSCA) is a Level C OSRO: River/Canal: Temporary Storage capacity: 126,000 gals (3,000 BBLS) and Inland/Nearshore: 840,000 gals (20,000 BBLS) to meet Tier 1, 2 &amp; 3 requirements. The amount of daily capacity required in every scenario and tier is twice the de-rated daily rate required for oil recovery devices.</p> <p>Temporary storage is typically empty tanks, temporary impoundments, or portable bladders.</p> <p>"Daily amount" implies reuse of available temporary storage by hauling off accumulations, freeing more capacity daily.</p>					

Last updated: JANUARY 1995

Table ERAP H.2 Disposal Permits			
Permit Type	Issuing Agency	Existing Permit/ Generator Number	Comments
RCRA Waste (federal)	EPA	TX7170022787	
RCRA Waste (state)		Information Not Provided	
Burning (federal)	Regional Response Team	none	
Burning (state)		none	
Dead Wildlife (federal)	U.S. Fish and Wildlife Service	none	
Dead Wildlife (state)		none	
Other:			

Last updated: JANUARY 1996

### 1.1 Summary of EPA Waste Disposal Facilities in Corpus Christi, Texas

Table ERAP H.3 Hazardous Waste Transporters and Disposal Facilities			
Organization (Location)	Day Phone (24-hr Phone)	Service They Perform	Their Conditions of Acceptance
CCAD	(512) 939-2326		Specifics to be provided in future revisions
DLA	(512) 939-4122	Temporary Storage and Transport	Specifics to be provided in future revisions
DRMO	(512) 939-2933	Temporary Storage and Transport	Specifics to be provided in future revisions
DRMO is the Defense Reutilization and Marketing Office; it takes most waste from Navy installations.			
Note: All Waste on NAS Corpus Christi is Taken to DRMO/CCAD/DLA			

Last updated: JANUARY 1996

<b>Table ERAP H.4</b> <b>Re-use and Disposal of Recovered Oil</b>	
<b>Topic</b>	<b>Description of Methods, Facilities, and Personnel Involved</b>
Settling (in present storage)	NA
Settling (elsewhere)	NA
Testing (for reusability)	NA
Other Treatment of Recyclable Oil	NA
Use of Recyclable Oil	NA
Disposal of Non- Recyclable Oil	NA
Other:	
<b>This table assumes the temporary storage location to be the starting point.</b>	

Last updated: JANUARY 1995

Table ERAP H.5 Re-use and Disposal of Contaminated Materials		
Topic		Description of Methods, Facilities, and Personnel Involved
Soil	Recovery	NA
	Treatment	NA
	Disposal	NA
Response Equipment	Decontamination	NA
	Disposal or Reuse	NA
Personal Protective Equipment	Decontamination	NA
	Disposal or Reuse	NA
Chemicals	Decon Solution Disposal	NA
	Dispersant Disposal	NA
	Other Disposal:	
Adsorbents	Reuse	NA
	Disposal	NA
Dead Wildlife		Dead federally endangered/threatened species will be turned over to the U.S. Fish and Wildlife Service.
Vegetation		NA
Shoreline Debris		NA
Other:	Use of Recyclable Oils	Contractor for DRMO is recycling contractor
Many Navy "oils" are fuels that evaporate readily, and cleanup often consists of airing affected material, but air quality boards may impose restrictions of release of hydrocarbon vapors.		

Last updated: JANUARY 1995

## **1.2 Hazardous Waste Disposal**

### **1.2.1 Introduction**

Collection and disposal of spilled oil and debris are primary concerns during a spill emergency. Temporary storage of recovered oil and debris must be preplanned to minimize cleanup time. The majority of oil spills from Defense Fuel Organization (DFS) facilities will be less than 50 barrels. For larger spills that are beyond the capability of NAS Corpus Christi to contain and mitigate, assistance will be required from spill response contractors.

The following section reproduces DoD 4160.21-M, Hazardous Property Management which covers the handling, processing, and disposal of hazardous wastes.

### **1.2.2 DoD 4160.21 - M, Hazardous Property Management**

#### **A. General**

1. The purpose of this chapter is to provide DOD installations and Defense Logistics Agency (DLA) personnel with guidance for handling, processing, and disposing of hazardous property, in accordance with applicable environmental safety, and other pertinent laws and regulations.
2. The DoD policy is to store, handle, and dispose of all hazardous property in an environmentally acceptable manner in accordance with applicable environmental, safety, and other pertinent laws and regulations.
3. For definitions see attachment 1, this chapter, and Chapter III, Abbreviations and Definitions.

#### **B. Responsibilities**

1. DoD installations responsibilities are as follows:
  - a. Comply with DoD Instruction 6060.5, Hazardous Material Information System, and DoD Instruction 6055.1, DoD Occupational Safety and Health Program, and respective implementing regulations.
  - b. Where feasible, minimize quantities of hazardous property through resource recovery, recycling, source separation, nonhazardous substitutes, and acquisition policies.
  - c. Provide technical and analytical assistance, including research and development support, to DLA to accomplish disposal, if requested.
  - d. Provide all available information to DLA, as required, to complete environmental documentation; such as, environmental impact statements associated with disposal.
  - e. Properly identify package, label, and certify conformance with established environmental, safety, and transportation criteria before transferring accountability for hazardous property to DLA.
  - f. When requested, assist DLA by providing information and comments on federal, state, regional, and local regulations being developed to control hazardous property disposal;

such as, ability of particular installation to comply and impact on DoD. Alert DLA to any local situation which could impact hazardous property disposal.

- g. Retain physical custody of hazardous property within the guidelines provided in paragraph C, this chapter.
- h. Provide for disposal of the following categories of hazardous property.
  - (1) Toxicological, biological, radiological, and lethal chemical warfare materials which, by U.S. law, must be destroyed. Disposal of the by-products of such material is the responsibility of the DoD installation with assistance from DLA.
  - (2) Material which cannot be disposed of in its present form due to military regulation; such as, AEDA, controlled medical items. This category would include those instances where military regulations require the obliteration of all markings that could relate an excess material to its operational program. Once the appropriate actions are taken to meet the military regulation, the resulting material could then be turned in to the servicing DRMO.
  - (3) Municipal-type garbage, trash, and refuse resulting from residential, institutional, commercial, agricultural, and community activities, which can be disposed of in a state or locally permitted sanitary landfill.
  - (4) Contractor-generated materials which are the contractor's responsibility for disposal under the terms of the contract. The HW identification number holder (normally the installation commander) must maintain appropriate control of these materials or wastes and assure they are transported and disposed of in compliance with the law.
  - (5) Sludges resulting from municipal-type wastewater treatment facilities.
  - (6) Sludges and residues generated as a result of industrial plant processes or operations. Properly identified industrial process sludges and residues which are not commingled or a product of an industrial waste treatment facility are the responsibility of DLA. DLA does not take sludges and residues from wastewater treatment facilities. DLA does take sludges and residues from industrial processes that have not been commingled. For example, sludge and residues from industrial process "A" must be collected and stored separately from sludges and residues resulting from industrial process "B." Each process may result in sludges and residues that contain a mixture of ingredients and contaminants but the sludges and residues from each process must be collected and stored separately and not commingled.
  - (7) Refuse and other discarded material which result from mining, dredging, construction, and demolition operations.
  - (8) Unique wastes and residues of a nonrecurring nature which research and development experimental programs generate.
  - (9) Waste and residues (including contaminated soil) resulting from cleanup of sites associated with long-term widespread contamination of the environment. This includes waste and residues from installation restoration efforts.

2. The DLA responsibilities are as follows:

- a. Comply with DoDI 6065.5, and DoDI 6055.1, and respective implementing regulations.
- b. Accomplish documentation (including records) for DLA disposal actions as required under applicable environmental and other pertinent laws and regulations.
- c. Initiate contracts or agreements for DLA disposal actions.
- d. Accept accountability for all hazardous property, except those categories under responsibility of DoD installations (paragraph B1) which have been properly identified, packaged, labeled, and certified in accordance with environmental and transportation laws and regulations.
- e. Accept sludges and residues from industrial processes that have not been commingled; e.g., sludges and residues from industrial process "A" must be collected and stored separately from sludges and residue resulting from industrial process "B."
- f. Accept spill residues resulting from immediate cleanup actions of an emergency nature in response to specific, isolated operational spills.
- g. Accept accountability, but not physical custody, of noncontrolled condemned medical items that are RCRA-regulated hazardous wastes.
- h. Accept custody of hazardous property within the guidelines provided in paragraph C, this chapter.
- i. Program for construction of storage facilities in support of the DLA disposal mission.
- j. Provide any repackaging, overpacking, or handling of hazardous property that may be required after acceptance of accountability by the DRMO.
- k. Establish an inventory control system for the types, quantities, and locations of available hazardous property for which DLA is responsible in the event that some other activity might be able to use particular property as a resource.
- l. Provide an economic incentive for DoD installations to segregate and minimize waste generation by:
  - (1) Providing feedback to Military Departments and Defense Agencies on the costs associated with disposal of HW.
  - (2) Providing 100 percent reimbursement to DoD installations with qualified recycling programs for hazardous materials or wastes sold by DLA for recycling in accordance with DoD policy.
- m. Contract for disposal technology not available within the DoD.
- n. Minimize environmental risks and costs associated with the extended care, handling, and storage of hazardous property by accomplishing disposal within a significantly compressed disposal cycle. DRMOs shall notify the permit owner, in writing, of any situation that could result in noncompliance with environmental regulations.

- o. Operate a system to ensure that sufficient disposal capability is programmed to preclude extended delays in the hazardous property disposal process.
- p. Maintain an analysis and information distribution capability of current technological advances on DoD hazardous property disposal procedures and advise DoD installations of such developments on a continuing basis. Additionally, ensure that DoD installations are apprised of any federal, state, regional, and local regulations being developed to control hazardous property disposal.
- q. Serve as the DoD focal point to recommend matters of policy and guidance to OASD for disposal of hazardous property within the assigned responsibility of DLA.
- r. Establish procedures relative to assigned responsibility for hazardous property disposal. Unresolved issues shall be forwarded to OASD with pertinent comments.
- s. Notify the military services of contractor or any other actions which could compromise installation compliance with environmental regulations.
- t. Assure that HW treatment, storage, and disposal (TSD) contracts provide for disposal in RCRA permitted facilities and listings of EPA ID numbers for each TSD in the contract are available to installation commanders.
- u. When requested, DLA shall make every effort to provide commercial disposal contract service for hazardous property that is the responsibility of the military services (such as, commingled IWTP sludges and residues; installation restoration wastes and residues). In these instances, the military service shall provide an advance fund citation and sufficient advance notification to allow placement of the property on a DRMS contract. DRMOs shall accept accountability on a wash/post basis.

### **C. Physical Custody**

DoD policy is to safely store hazardous materials and wastes to protect human health and the environment, and in such a manner as to create optimum conditions for reduction of the DoD waste-stream through maximized reutilization, transfer, donation, and sales efforts.

- 1. Physical custody of hazardous wastes at those DRMOs lacking RCRA-permitted storage facilities is determined by the host installation commander.
- 2. OSBs manned by only one employee shall not accept physical custody of hazardous materials or waste due to safety considerations.
- 3. DRMOs having RCRA-permitted storage facilities shall accept physical custody of hazardous materials and wastes from serviced activities until allowable storage capacity is reached. HW shall receive priority for storage space. HM may be stored only when there are no immediate HW storage requirement. Serviced activities should provide the greatest advance notification possible to DRMOs of forthcoming generations to allow for capacity management by the DRMOs.
- 4. DRMOs with RCRA-permitted storage facilities shall accept physical custody of only those hazardous wastes that are listed in the current RCRA permit.

#### **D. Turn in Procedures (General)**

DoD installations and DLA are responsible for compliance with environmental and other pertinent laws and regulations. To ensure environmental compliance turn in activities and DRMOs shall:

1. Preplan, schedule, and coordinate hazardous property turn ins.
2. Process turn ins of hazardous property as follows:
  - a. Identification. Exceptions to the procedures identified below may be granted only where substantial economies can be realized. DRMOs/generators may develop alternative identification procedures that must be approved by DRMS. Alternative identification procedures must meet regulatory and disposal contract requirements.
    - (1) NSN-identified hazardous property.
      - (a) The turn in activity shall provide the following upon turn in of NSN-identified hazardous property to the DRMO:
        1. Valid NSN
        2. Noun name as cataloged in the supply system.
        3. Chemical name of hazardous contaminants and noun name of nonhazardous contaminants.
        4. Amount of hazardous and non-hazardous contaminants based on user's knowledge or testing of the item expressed in a range of content (percentage by weight or ppm) as applicable.
      - (b) When necessary, the DRMO shall:
        1. Search HMIS and other data sources for chemical names of hazardous components.
        2. Search HMIS for transportation and other data as required.
        3. Contact manufacturer for data as required.
    - (2) LSN/FSC-identified property.
      - (a) The turn-in activity shall provide the following for turn in of hazardous property to the DRMO.
        1. Chemical name of hazardous components.
        2. Chemical name of hazardous contaminants and noun name of non-hazardous contaminants.
        3. Amounts of hazardous and non-hazardous contaminants based on user's knowledge or testing of the item expressed in a range of content (percentage by weight or ppm) as applicable.
      - (b) The DRMO shall:
        1. Accept accountability of property identified in the above manner.
        2. Accept physical custody in accordance with paragraph C, this chapter.

3. Assign proper DOT shipping description to item received from onsite or for property that is received in place and is not transported over public highways.
  4. Assist turn in activity in determining proper identification as capabilities permit.
  5. Reject turn in when proper identification in accordance with the above is not provided.
- (3) PCBs. An analysis of PCB concentration as determined by a scientifically acceptable analytical method must accompany the DTID unless the property is hermetically sealed or has a manufacturer's label or nameplate that indicates the presence of PCBs; such as, generic or commercial name. The analysis shall indicate the amount of PCB in ppm or in the following ranges:
- (a) Less than 50 ppm
  - (b) 50-499 ppm
  - (c) 500 ppm or more.

Individual analysis is required for each item. Items such as capacitors which do not have sampling or servicing parts and are sealed by the manufacturer and are suspected to contain PCBs shall be turned in as PCB items (500 ppm and over) without analysis. DRMS may accept batch testing results of mineral oil dielectric on a case-by-case basis. However, approval for batch testing shall be obtained from DRMS before turn in.

b. Packaging

- (1) Property turned in to the DRMO must be in containers that are nonleaking and safe to handle. The containers must be able to withstand normal handling or the turn in shall be rejected.
- (2) DOT-specified containers are required for storage and movement of hazardous wastes. These wastes may also be accumulated in bulk in RCRA-permitted facilities.
- (3) DOT-specified containers are not required for turn in to the DRMO of anything other than the hazardous wastes. The transporting agency does have a responsibility to comply with DOT requirements for transport over public highways.
- (4) When hazardous property turned in for disposal is packaged in the original military containers, the turn in activity shall provide the DRMO with a certification as to the true condition and reliability of the containers. The certification shall be placed in block Y of the DTID by the turn in activity and shall contain one of the following statements:
  - (a) Packaged in accordance with DOT 49-CFR 170-189.
  - (b) Packaging equals/exceeds DOT 49 CFR 170-189.
  - (c) Packaging is substandard to DOT 49 CFR 170-189 (this is not acceptable for hazardous waste "HW" or offsite hazardous property turn ins).

- (5) DoD property in foreign countries or territories shall be packaged in accordance with the host country's environmental laws and status of forces agreements.

c. Labeling

- (1) Hazardous property shall be labeled in conformance with established environmental, safety, and transportation laws and regulations.
- (2) PCB marking requirements are as prescribed by the EPA in 40 CFR 761. Items containing 50 ppm or more PCB must be marked.

d. Disposal Turn in Document (DTID)

- (1) All property turned in to the DRMO shall be done so with a properly prepared DTID. Standard procedures for preparation of a DTID are found in DoD 4000.25-1-M.
- (2) Additional information, to be included in the appropriate blocks of the DTID, is as follows:
  - (a) Block C-Insert "HM" if the property is a hazardous material or "HW" if the property is a regulated hazardous waste.
  - (b) Blocks W and X
    - 1. For non-NSC hazardous waste items enter the word "waste" and the item's proper shipping name as shown in DOT 49 CFR 172 and as much descriptive information as possible in blocks W and X, and /or attach additional documentation with these data.
    - 2. For NSN hazardous waste items block W shall be used for internal purposed and block X must contain the word "waste" followed by the item's proper shipping name as shown in DOT 49 CFR 172.
  - (c) Block Y-Use this block (in lieu of block AA through EE) for the deposit account number. Note: This is not an entry required on behalf of hazardous property documentation but a movement of data prescribed to permit use of the previously identified blocks for other purposes.
  - 3. Block 8 of the DTID shall be signed and dated by the DRMO and returned to the turn in activity within 5 working days from receipt. The signed copy of the DTID shall serve as valid receipt of accountability for the hazardous property by the DRMO.

**E. Turn in Procedures (Specific)**

Detailed guidance governing turn in well as handling and processing of specific hazardous property is contained in chapter VIII, Property Requiring Special Processing.

## **F. Implementation of RCRA**

### **1. Permits.**

- a. The installation commander is responsible to ensure compliance with all RCRA requirements for the installation. The installation commander is also responsible to notify, to apply for permits, and to report to EPA or the state, as required, for all installation activities, including tenants. Tenants are responsible for conducting their activities in accordance with RCRA and permit requirements at the facility. Tenants shall provide necessary documentation, signed and completed, to the host for permit applications and for reports as required by EPA or the state. Submittals shall be in the format required by the regulatory agencies.
- b. The individual facility operational managers are responsible for conducting their activities in accordance with RCRA. Those facility managers, including tenants, shall provide necessary documentation to the installation commander for permit applications, shall provide to the installation commander reports required by EPA or the state, and shall ensure compliance with RCRA regulations and permit requirements at that facility.
- c. The installation commander shall sign as the owner and the Defense Reutilization and Marketing Region Commander shall sign as the operator.

### **2. Hazardous Waste Management Plan**

Implementation of the comprehensive hazardous waste management program, mandated by RCRA, requires maximum cooperation of all activities on an installation. The following guidance applies to development and implementation of a Hazardous Waste Management Plan:

- a. The installation commander is responsible for developing and implementing a Hazardous Waste Management Plan to include all tenants on the installation. This plan shall identify and implement hazardous waste management actions required by RCRA. Tenants are responsible for providing input to the installation commander for their portion of the plan.
- b. All tenants shall comply with applicable portions of the Hazardous Waste Management Plan and ensure that internal operating procedures are consistent.
- c. The DRMO Chief shall ensure that inspections, safety precautions and actions, records, etc., as established in the installation Hazardous Waste Management Plan, are accomplished for hazardous property for which the DRMO has physical custody and accountability.
- d. For hazardous property received in place by the DRMO, the activity having physical custody shall be responsible for the required periodic inspections, care, and protection of this property until it is disposed of by the DRMO.
- e. Required support or assistance that is available at the host installation shall be provided to the DRMO upon request. When the costs warrant, reimbursement may be required.

3. Manifesting.

A Uniform Hazardous Waste Manifest (UHWM) shall be prepared to accompany all offsite shipments of hazardous waste and shall include a 24-hour emergency notification telephone number. The permit holder (installation commander) has primary responsibility for signing manifests, but may delegate signature authority. However, the DRMO shall co-sign all manifests for shipments of hazardous property on DLA accountable records. In those instances where the permit holder delegates signature to the DRMO, only one signature shall appear.

4. Record-Keeping and Reporting.

Installations shall comply with federal and state hazardous waste record-keeping and reporting requirements. Tenants shall submit reports required by the installation's Hazardous Waste Management Plan within time frames established by the installation commander. All reports to EPA or the state shall be prepared in proper format by the operators and co-signed and submitted by the installation commander.

**G. Hazardous Materials Information System (HMIS)/Hazardous Materials Technical Center (HMTC)**

1. DoD I 6050.5 assigns responsibilities for the establishment and use of a DoD hazardous material information system.
2. The HMIS is designed to support the major areas of health, safety, and transportation. This includes a wide range of data related to safety, health, transportation, and disposal of hazardous materials. Caution should be exercised in applying this information without the proper training and knowledge of procedures which are related to specific hazards. Data in this system are reference information and must be used in conjunction with, not instead of, procedures and regulatory documents. If there is any doubt about use of the safety and health information in the microfiche, the local health and safety staff should be contacted.
3. HMIS data are published on microfiche annually with quarterly cumulative updates. Items on the list are identified by NSN, manufacturer, and part number (trade name) and are sequenced by NIIN.
4. HMTC is a DLA managed, contractor-operated information source for technical information on safety, health, handling, transportation, disposal, and environmental aspects of hazardous materials management. HMTC maintains a telephone response capability for DoD use in accessing this information.

Telephone numbers are:

(800) 638-8958  
(301) 468-8858  
FTS (202) 468-8858

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## **TAB I — EVACUATION PLAN**

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## 1.0 EVACUATION PLAN

This section lists evacuation alertings.

Table ERAP I.1 Installation and Local Evacuation Plans		
Plan Area or Type	Cognizant Organization	Where Copy of Plan Can Be Found
NAS Corpus Christi Disaster Preparedness Plan	Naval Air Station Corpus Christi	Fuels Branch Office, Building 1717

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Table ERAP I.2 Evacuation Alerting			
Organizations to Be Alerted If an OPA 90 Facility Is Evacuated		Day Phone	24-hr Phone
NAS Corpus Christi	1. Safety Department	(512) 939-2385	Not provided
	2. NAS Corpus Christi Quarterdeck	(512) 939-2383	(512) 939-2383
	3. K. White, CDR, USN	(512) 939-3664	(512) 939-2383
Local Authorities (law enforcement, fire, emergency planning, etc.)	1. Emergency Management Office	(512) 880-3700	(512) 880-3700
	2. Fire Department Preparedness	911 or x3333	911 or x3333
	3. Corpus Christi Police	911	911
Nearby Institutions	1. Flour Bluff High School	(512) 937-2635	--
	2. Naval Hospital Command Officer	(512) 939-2685	--
Radio Stations	1. KEYS Radio (English)	(512) 882-74111	(512) 882-7411
	2. KCCT (Spanish)	(512) 289-0999	(512) 289-0999
Television Stations	1. KIII-TV (English)	(512) 854-4733	(512) 854-4733
	2. KORO-TV (Spanish)	(512) 883-2823	(512) 883-2823

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**Table ERAP I.3**  
**Evacuation Plans: NAS Corpus Christi, Corpus Christi, Texas**

Topic		Discussion of Key Facts (of Use During an Emergency)
Hazardous Substances (with toxicity or volume to possibly trigger facility evacuation)	Inventory	This facility's northern boundary is along Corpus Christi Bay, the western boundary is along Oso Bay and the eastern boundary is along the Laguna Madre. It stores more than 2.0 million gallons of petroleum products in above and underground storage tanks.
	Probable Spill Flow Pathways	Most spilled fuel will be contained by dike systems. Fuel that escapes the dikes will flow into the ditch systems on base, go into the groundwater, or may eventually make it to open water.
	Hazards to Personnel	JP-5 and Fuel Oil No. 2 are flammable liquids that presents inhalation and skin contact hazards.
	Wind Conditions Affecting Hazards	Vapors from JP-5/Fuel Oil No. 2 will be dispersed downwind. All personnel should be kept upwind of spilled fuel oil. Buildings downwind of large spills may need to be evacuated. This decision will be made after evaluating existing conditions. Spills on water may be affected by high wind speeds.
	Water Conditions Affecting Hazards	JP-5/Fuel Oil No. 2 are lighter than water, so fuel that enters the water will spread in the direction of flow on Corpus Christi Bay, Oso Bay, or the Laguna Madre and fuel that impacts an aquifer will flow on top of the water table.
Evacuation Initiation	Who Declares Evacuation	The IC/NOSC will determine when an evacuation of part or all of NAS Corpus Christi is required. The IC in consultation with the FOSC, and State officials will determine when an evacuation of the community surrounding NAS Corpus Christi is required.
	How Surrounding Area Alerting Initiated	The community surrounding NAS Corpus Christi will be notified of the need for evacuation by local and state police.
	How Facility Alerting Initiated	Facility personnel will be notified by NAS Corpus Christi Security.
	Methods of Alerting Facility Personnel	Not available.
	Alarm/Siren Locations	Not available.
	Estimated Facility Evacuation Time	Not determined.
Onsite Resources	"Safe Haven" Locations	There are no safe havens on NAS Corpus Christi.
	Emergency Breathing Gear Locations	None
Disaster Response	Fire/Ambulance Arrival Route	Via North Gate and roads.
	Medical Facility for Injured	Primary - NAS Corpus Christi Naval Hospital, (512) 939-2685 Secondary - Doctors Regional Medical Center, (512) 857-1400
	How Injured Will Be Transported	Ambulance Service, 911 or 3333 Halo Flight-Air Medivac, 911 or 3333
Initial Staging Areas in Facility	Where	The initial staging area is the Fire Department.
	How Personnel Are Accounted for	The supervisor is responsible for accounting for NAS Corpus Christi personnel and visitors.
Evacuation Routes out of Facility	How Posted in Facility	Evacuation routes are posted in each building on NAS Corpus Christi.
	Routes (primary)	The primary evacuation route is through main gate.
	Routes (secondary)	Other gates may be open at the time of the incident.

<b>Table ERAP 1.3</b> <b>Evacuation Plans: NAS Corpus Christi, Corpus Christi, Texas</b>		
<b>Topic</b>		<b>Discussion of Key Facts (of Use During an Emergency)</b>
Safe Staging Area(s) Outside Facility	Location of Area(s)	The areas outside the North Gate.
	Route from Facility (Primary)	Proceed out the toward and out the North/South gate depending on the wind and the location of the hazard.
	Route from Facility (Secondary)	Information not provided.
	How Personnel Are Accounted for	Personnel will be logged out of/into of staging area by supervisor of responding units.
Command Center	Where	Mobile (Fire Department)
	Communications Capabilities	Communications capabilities are described in FRP TAB 10.
Comments:		

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<p align="center"><b>Table I.4</b>  <b>Evacuation Plan: Building 257 – CCAD Hazardous Waste Storage Facility</b></p>		
Topic		Discussion of Key Facts (of Use During an Emergency)
Hazardous Substances (with Toxicity or Volume to Possibly Trigger Facility Evacuation)	Inventory (with quantity and storage location)	1) Spill of 55 gallons or greater of a flammable solvent such as MEK or toluene 2) Mixing of incompatible acids/caustics and halogenated solvents
	Probable Spill Flow Pathways	Likely to be contained to waste storage facility.
	Hazards to Personnel	Toxic effects due to inhalation of vapors, dermal hazards, fire hazards.
	Wind Conditions Affecting Hazards	Should evacuate upwind.
	Water Conditions Affecting Hazards	NA
Evacuation Initiation	Who Declares Evacuation	First responder
	How Surrounding Area Alerting Initiated	Base security, Fire department
	How Facility Alerting Initiated	First Responder. No Automatic Alarm Available
	Methods of Alerting Facility Personnel	Voice, hand signals
	Alarm/Siren Locations	NA
	Estimated Facility Evacuation Time	Less than 1 minute
On-site Resources	"Safe Haven" Locations	Upwind - or across Avenue D.
	Emergency Breathing Gear Locations	HazMat Spill Response Vehicle
Disaster Response	Fire/Ambulance Arrival Route	Via First Street, Avenue D.
	Medical Facility for Injured	Primary - NAS Corpus Christi Naval Hospital, (512) 939-2685 Secondary - Doctors Regional Medical Center, (512) 857-1400
	How Injured Will Be Transported	Ambulance Service, 911 or 3333 Halo Flight-Air Medivac, 911 or 3333
Initial Staging Areas in Facility	Where	NAS Corpus Christi Naval Hospital
	How Personnel Are Accounted for	Supervisor head count
Evacuation Routes out of Facility	How Posted in Facility	Fire Bill on wall near exit
	Routes (Primary)	North roll-up doors
	Routes (Secondary)	Office door
Safe Staging Area(s) Outside Facility	Location of Area(s)	Outside building - upwind 150 feet
	Route from Facility (Primary)	North roll-up doors
	Route from Facility (Secondary)	Office door
	How Personnel Are Accounted for	Supervisor head count

<b>Table I.4</b> <b>Evacuation Plan: Building 257 — CCAD Hazardous Waste Storage Facility</b>		
<b>Topic</b>		<b>Discussion of Key Facts (of Use During an Emergency)</b>
Command Center	Where	Mobile (Fire Department)
	Communications Capabilities	FM Radio, Cellular Telephone
Comments:		

<p align="center"><b>Table I.5</b>  <b>Evacuation Plan: CCAD Industrial Wastewater Pretreatment (Building 271)</b></p>		
<b>Topic</b>		<b>Discussion of Key Facts (of Use During an Emergency)</b>
Hazardous Substances (with Toxicity or Volume to Possibly Trigger Facility Evacuation)	Inventory (with Quantity and Storage Location)	1) Failure of an Acid Tank, Mixing of Incompatible Substances resulting in Hydrogen Cyanide Release 2) Chlorine Gas: 3-5 150-lb Cylinders Compressed Chlorine Gas 3) Sulfur Dioxide: 3-5 1-Ton Cylinders Compressed Sulfur Dioxide
	Probable Spill Flow Pathways	Acid Release: Likely to be contained to plant area or tank containment area.  Gas Release: Downwind
	Hazards to Personnel	Toxic effects due to inhalation of vapors, dermal hazards, fire hazards.
	Wind Conditions Affecting Hazards	Should evacuate upwind.
	Water Conditions Affecting Hazards	NA
Evacuation Initiation	Who Declares Evacuation	First responder, automatic alarm signal
	How Surrounding Area Alerting Initiated	Automatic alarm, Base Security, Fire Department
	How Facility Alerting Initiated	Automatic alarm signal
	Methods of Alerting Facility Personnel	Automatic Alarm Signal
	Alarm/Siren Locations	At each process/storage area
	Estimated Facility Evacuation Time	Less than 1 minute
On-site Resources	"Safe Haven" Locations	Upwind - or across Fourth Street
	Emergency Breathing Gear Locations	HazMat Spill Response Vehicle, Building 271
Disaster Response	Fire/Ambulance Arrival Route	Via Ocean Drive, Fourth Street.
	Medical Facility for Injured	Primary - NAS Corpus Christi Naval Hospital, (512) 939-2685 Secondary - Doctors Regional Medical Center, (512) 857-1400
	How Injured Will Be Transported	Ambulance Service, 911 or 3333 Halo Flight-Air Medivac, 911 or 3333
Initial Staging Areas in Facility	Where	NAS Corpus Christi Naval Hospital
	How Personnel Are Accounted for	Supervisor head count
Evacuation Routes out of Facility	How Posted in Facility	Fire Bill on wall near exit
	Routes (Primary)	Upwind
	Routes (Secondary)	Upwind

<b>Table I.5</b> <b>Evacuation Plan: CCAD Industrial Wastewater Pretreatment (Building 271)</b>		
<b>Topic</b>		<b>Discussion of Key Facts (of Use During an Emergency)</b>
Safe Staging Area(s) Outside Facility	Location of Area(s)	Outside building - upwind 500 feet
	Route from Facility (Primary)	Upwind
	Route from Facility (Secondary)	Upwind
	How Personnel Are Accounted for	Supervisor head count
Command Center	Where	Mobile (Fire Department)
	Communications Capabilities	FM Radio, Cellular Telephone
Comments:		

**Table I.6**  
**Evacuation Plan: Industrial/domestic Wastewater Pretreatment Facility**  
**(Buildings 1830 and 170)**

Topic		Discussion of Key Facts (of Use During an Emergency)
Hazardous Substances (with Toxicity or Volume to Possibly Trigger Facility Evacuation)	Inventory (with Quantity and Storage Location)	1) Chlorine Gas: 3-5 1-ton Cylinders Compressed Chlorine Gas 2) Sulfur Dioxide: 3-5 150-pound Cylinders Compressed Sulfur Dioxide <b>MAXIMUM RELEASE LIKELY: 1 TON COMPRESSED CHLORINE GAS OR 150 LB SULFUR DIOXIDE</b>
	Probable Spill Flow Pathways	Gas Release: Downwind
	Hazards to Personnel	Toxic effects due to inhalation of vapors, dermal hazards, fire hazards.
	Wind Conditions Affecting Hazards	Should evacuate upwind.
	Water Conditions Affecting Hazards	NA
Evacuation Initiation	Who Declares Evacuation	First responder, automatic alarm signal
	How Surrounding Area Alerting Initiated	Automatic alarm, Base Security, Fire Department
	How Facility Alerting Initiated	Automatic alarm signal
	Methods of Alerting Facility Personnel	Automatic alarm signal
	Alarm/Siren Locations	At each metering/storage area
	Estimated Facility Evacuation Time	Less than 1 minute
On-site Resources	"Safe Haven" Locations	Upwind - or across Ocean Drive
	Emergency Breathing Gear Locations	HazMat Spill Response Vehicle, Building 170
Disaster Response	Fire/Ambulance Arrival Route	Via Ocean Drive.
	Medical Facility for Injured	Primary - NAS Corpus Christi Naval Hospital, (512) 939-2685 Secondary - Doctors Regional Medical Center, (512) 857-1400
	How Injured Will Be Transported	Ambulance Service, 911 or 3333 Halo Flight-Air Medivac, 911 or 3333
Initial Staging Areas in Facility	Where	NAS Corpus Christi Naval Hospital
	How Personnel Are Accounted for	Supervisor head count
Evacuation Routes out of Facility	How Posted in Facility	Fire Bill on wall near exit
	Routes (Primary)	Upwind
	Routes (Secondary)	Upwind

<b>Table 1.6</b> <b>Evacuation Plan: Industrial/domestic Wastewater Pretreatment Facility</b> <b>(Buildings 1830 and 170)</b>		
<b>Topic</b>		<b>Discussion of Key Facts (of Use During an Emergency)</b>
Safe Staging Area(s) Outside Facility	Location of Area(s)	Outside building - upwind 500 feet
	Route from Facility (Primary)	Upwind
	Route from Facility (Secondary)	Upwind
	How Personnel Are Accounted for	Supervisor head count
Command Center	Where	Mobile (Fire Department)
	Communications Capabilities	FM Radio, Cellular Telephone
Comments:		

Table ERAP I.7 Evacuation Plan: Building 1602 - Hazardous Waste Storage Facility		
Topic		Discussion of Key Facts (of Use During an Emergency)
Hazardous Substances (with Toxicity or Volume to Possibly Trigger Facility Evacuation)	Inventory (with Quantity and Storage Location)	1) Spill of 55 gallons or greater of a flammable solvent such as MEK or toluene. 2) Mixing of incompatible acids/caustics and halogenated solvents.
	Probable Spill Flow Pathways	Likely to be contained to waste storage facility.
	Hazards to Personnel	Toxic effects due to inhalation of vapors, dermal hazards, fire hazards.
	Wind Conditions Affecting Hazards	Should evacuate upwind.
	Water Conditions Affecting Hazards	NA
Evacuation Initiation	Who Declares Evacuation	First responder
	How Surrounding Area Alerting Initiated	Automatic alarm and visual signal
	How Facility Alerting Initiated	Warning alarms on building exterior, Base Security
	Methods of Alerting Facility Personnel	Automatic alarm
	Alarm/Siren Locations	Inside and outside of building
	Estimated Facility Evacuation Time	Less than 1 minute
On-site Resources	"Safe Haven" Locations	Upwind - or across Patrol Road.
	Emergency Breathing Gear Locations	None
Disaster Response	Fire/Ambulance Arrival Route	Via Patrol Road.
	Medical Facility for Injured	Minor Injuries - NAS Corpus Christi Naval Hospital, (512) 939-2685 Sever Injuries - Doctors Regional Medical Center, (512) 857-1400
	How Injured Will Be Transported	Ambulance Service, 911 or 3333 Halo Flight-Air Medivac, 911 or 3333
Initial Staging Areas in Facility	Where	NAS Corpus Christi Naval Hospital
	How Personnel Are Accounted for	Supervisor head count
Evacuation Routes out of Facility	How Posted in Facility	Fire Bill on wall near exit
	Routes (Primary)	North and east doors
	Routes (Secondary)	West doors and through gate
Safe Staging Area(s) Outside Facility	Location of Area(s)	Outside building - upwind 150 feet
	Route from Facility (Primary)	North and east doors
	Route from Facility (Secondary)	West door and through gate
	How Personnel Are Accounted for	Supervisor head count

Table ERAP I.7 Evacuation Plan: Building 1602 - Hazardous Waste Storage Facility		
Topic		Discussion of Key Facts (of Use During an Emergency)
Command Center	Where	Mobile (Fire Department)
	Communications Capabilities	FM Radio, Cellular Telephone
Comments:		

**Table ERAP I.8**  
**Evacuation Plan: HazMin Program (Building 1854) - HazMat Storage Facility**

Topic		Discussion of Key Facts (of Use During an Emergency)
Hazardous Substances (with Toxicity or Volume to Possibly Trigger Facility Evacuation)	Inventory (with Quantity and Storage Location)	1) Spill of 55 gallons or greater of a flammable solvent such as MEK or toluene. 2) Mixing of incompatible acids/caustics and halogenated solvents.
	Probable Spill Flow Pathways	Likely to be contained to storage facility.
	Hazards to Personnel	Toxic effects due to inhalation of vapors, dermal hazards, fire hazards.
	Wind Conditions Affecting Hazards	Should evacuate upwind.
	Water Conditions Affecting Hazards	NA
Evacuation Initiation	Who Declares Evacuation	First responder
	How Surrounding Area Alerting Initiated	Alarm and visual signal
	How Facility Alerting Initiated	Warning alarms on building exterior, base security
	Methods of Alerting Facility Personnel	Automatic alarm
	Alarm/Siren Locations	Inside and outside of building
	Estimated Facility Evacuation Time	Less than 1 minute
On-site Resources	"Safe Haven" Locations	Upwind - or across Supply Road, outside of compound.
	Emergency Breathing Gear Locations	None
Disaster Response	Fire/Ambulance Arrival Route	Via Massey Ave. and Supply Road
	Medical Facility for Injured	Primary - NAS Corpus Christi Naval Hospital, (512) 939-2685 Secondary - Doctors Regional Medical Center, (512) 857-1400
	How Injured Will Be Transported	Ambulance Service, 911 or 3333 Halo Flight-Air Medivac, 911 or 3333
Initial Staging Areas in Facility	Where	NAS Corpus Christi Naval Hospital
	How Personnel Are Accounted for	Supervisor head count
Evacuation Routes out of Facility	How Posted in Facility	Fire Bill on wall near exit
	Routes (Primary)	Main roll-up door (east) and office door
	Routes (Secondary)	West emergency egress
Safe Staging Area(s) Outside Facility	Location of Area(s)	Outside HazMin compound - upwind 150 feet
	Route from Facility (Primary)	Main roll-up door (east) and office door - north through main gate
	Routes (Secondary)	West emergency egress - north through main gate
	How Personnel Are Accounted for	Supervisor head count

Table ERAP I.8 Evacuation Plan: HazMin Program (Building 1854) - HazMat Storage Facility		
Topic		Discussion of Key Facts (of Use During an Emergency)
Command Center	Where	Mobile (Fire Department)
	Communications Capabilities	FM Radio, Cellular Telephone
Comments:		

Table ERAP I.9 Evacuation Plan: Wastewater Treatment Plant		
Topic		Discussion of Key Facts (of Use During an Emergency)
Hazardous Substances (with Toxicity or Volume to Possibly Trigger Facility Evacuation)	Inventory (with Quantity and Storage Location)	Chlorine Gas: 3-5 1-Ton Cylinders Compressed Chlorine Gas Sulfur Dioxide: 3-5 1-Ton Cylinders Compressed Sulfur Dioxide  <b>MAXIMUM RELEASE LIKELY: 1 TON OF COMPRESSED CHLORINE GAS OR SULFUR DIOXIDE</b>
	Probable Spill Flow Pathways	Downwind
	Hazards to Personnel	Toxic effects due to inhalation of vapors.
	Wind Conditions Affecting Hazards	Should evacuate upwind.
	Water Conditions Affecting Hazards	NA
Evacuation Initiation	Who Declares Evacuation	First responder
	How Surrounding Area Alerting Initiated	Visual and audio alarm capabilities
	How Facility Alerting Initiated	Hand-held FM radio
	Methods of Alerting Facility Personnel	Visual and audio alarms
	Alarm/Siren Locations	Outside of storage and metering facility
	Estimated Facility Evacuation Time	Less than 1 minute
On-site Resources	"Safe Haven" Locations	Upwind - or across Bon Homme Richard Street
	Emergency Breathing Gear Locations	With Wastewater Plant Technician, Fire Department
Disaster Response	Fire/Ambulance Arrival Route	Via Bon Homme Richard Street
	Medical Facility for Injured	Primary - NAS Corpus Christi Naval Hospital, (512) 939-2685 Secondary - Doctors Regional Medical Center, (512) 857-1400
	How Injured Will Be Transported	Ambulance Service, 911 or 3333 Halo Flight-Air Medivac, 911 or 3333
Initial Staging Areas in Facility	Where	NAS Corpus Christi Naval Hospital
	How Personnel Are Accounted for	Supervisor head count
Evacuation Routes out of Facility	How Posted in Facility	Fire Bill on wall near exit
	Routes (Primary)	Facility outside - proceed up-wind
	Routes (Secondary)	None

<b>Table ERAP 1.9</b> <b>Evacuation Plan: Wastewater Treatment Plant</b>		
<b>Topic</b>		<b>Discussion of Key Facts (of Use During an Emergency)</b>
Safe Staging Area(s) Outside Facility	Location of Area(s)	Outside building - upwind
	Route from Facility (Primary)	Facility outside - proceed upwind
	Route from Facility (Secondary)	None
	How Personnel Are Accounted for	Supervisor head count
Command Center	Where	Mobile (Fire Department)
	Communications Capabilities	FM radio, Cellular Telephone
Comments:		

**Table ERAP I.10**  
**Evacuation Plan: Water Treatment Plant**

Topic		Discussion of Key Facts (of Use During an Emergency)
Hazardous Substances (with Toxicity or Volume to Possibly Trigger Facility Evacuation)	Inventory (with Quantity and Storage Location)	Chlorine Gas: 3-5 1-Ton Cylinders Compressed Chlorine Gas <b>MAXIMUM RELEASE LIKELY: 1 TON COMPRESSED CHLORINE GAS</b>
	Probable Spill Flow Pathways	Downwind
	Hazards to Personnel	Toxic effects due to inhalation of vapors.
	Wind Conditions Affecting Hazards	Should evacuate upwind.
	Water Conditions Affecting Hazards	NA
Evacuation Initiation	Who Declares Evacuation	First responder
	How Surrounding Area Alerting Initiated	Visual and audio alarm capabilities
	How Facility Alerting Initiated	Hand-held FM radio
	Methods of Alerting Facility Personnel	Visual and audio alarms
	Alarm/Siren Locations	Outside of Chlorine Building and Metering Facility
	Estimated Facility Evacuation Time	Less than 1 minute
On-site Resources	"Safe Haven" Locations	Upwind - or across Massey Ave.
	Emergency Breathing Gear Locations	With Water plant technician, Fire Department
Disaster Response	Fire/Ambulance Arrival Route	Via Massey Ave.
	Medical Facility for Injured	Primary - NAS Corpus Christi Naval Hospital, (512) 939-2685 Secondary - Doctors Regional Medical Center, (512) 857-1400
	How Injured Will Be Transported	Ambulance Service, 911 or 3333 Halo Flight-Air Medivac, 911 or 3333
Initial Staging Areas in Facility	Where	NAS Corpus Christi Naval Hospital
	How Personnel Are Accounted for	Supervisor head count
Evacuation Routes out of Facility	How Posted in Facility	Fire Bill on wall near exit
	Routes (Primary)	Facility outside - proceed upwind
	Routes (Secondary)	None
Safe Staging Area(s) Outside Facility	Location of Area(s)	Outside building - upwind
	Route from Facility (Primary)	Facility outside - proceed upwind
	Route from Facility (Secondary)	None
	How Personnel Are Accounted for	Supervisor head count

Table ERAP I.10 Evacuation Plan: Water Treatment Plant		
Topic		Discussion of Key Facts (of Use During an Emergency)
Command Center	Where	Mobile (Fire Department)
	Communications Capabilities	FM Radio, Cellular Telephone
Comments:		

**TAB J — MAPS**

**Table of Contents**

TAB J — MAPS .....	ERAP: TAB J-1
1.0 MAPS .....	ERAP: TAB J-1

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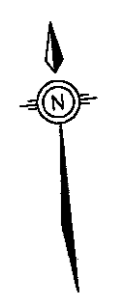


**TAB J — MAPS****1.0 MAPS**

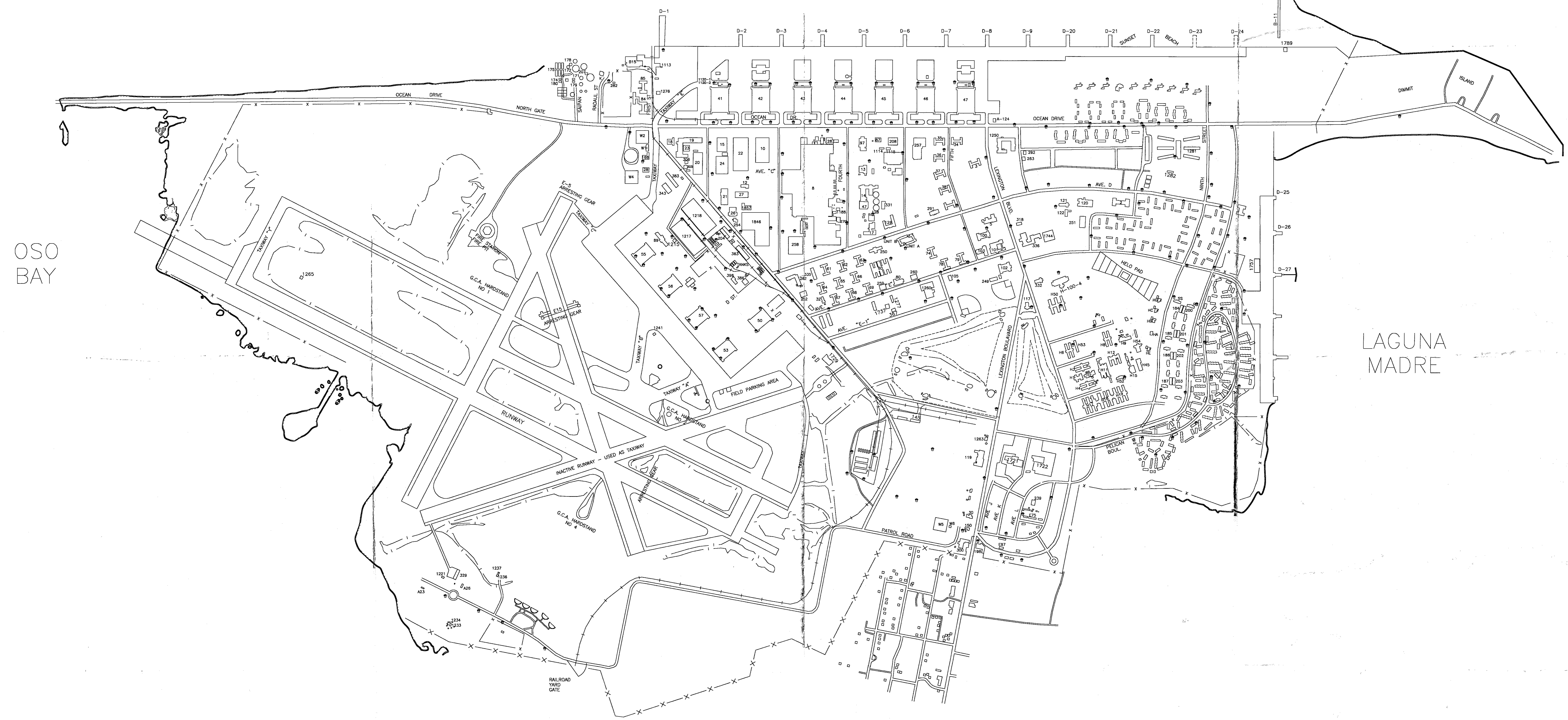
The following NAS Corpus Christi diagrams are contained in this section:

<b>NAS Corpus Christi Diagrams</b>		
<b>Number</b>	<b>Title</b>	<b>Drawing/Figure Name</b>
1.	NAS Corpus Christi: Base Map NAS Corpus Christi	050BMAP2
2.	NAS Corpus Christi: AST & UST Storage Locations	91AUSL01
3.	NAS Corpus Christi: Transformer Inventory by Utility Grid Location	91TIUGL1
4.	NAS Corpus Christi: Evacuation and Equipment Haul Route	50HAULRT
5.	NAS Corpus Christi: Generalized Potential Spill Flow Routes for ASTs and Select USTs	91GPSFR1
6.	NAS Corpus Christi: Drainage System: Potential Storm and Sanitary Sewer System Flow Direction	91DSSS01
7.	NAS Corpus Christi: Texas Water Commision Map: Nueces County Texas 178, Three sections	NUECES County Texas 178
8.	NAS Corpus Christi: Nueces County Texas Key to Sensitive areas	NUECES County Texas 178, Sensitive area key

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# CORPUS CHRISTI BAY



**LEGEND**

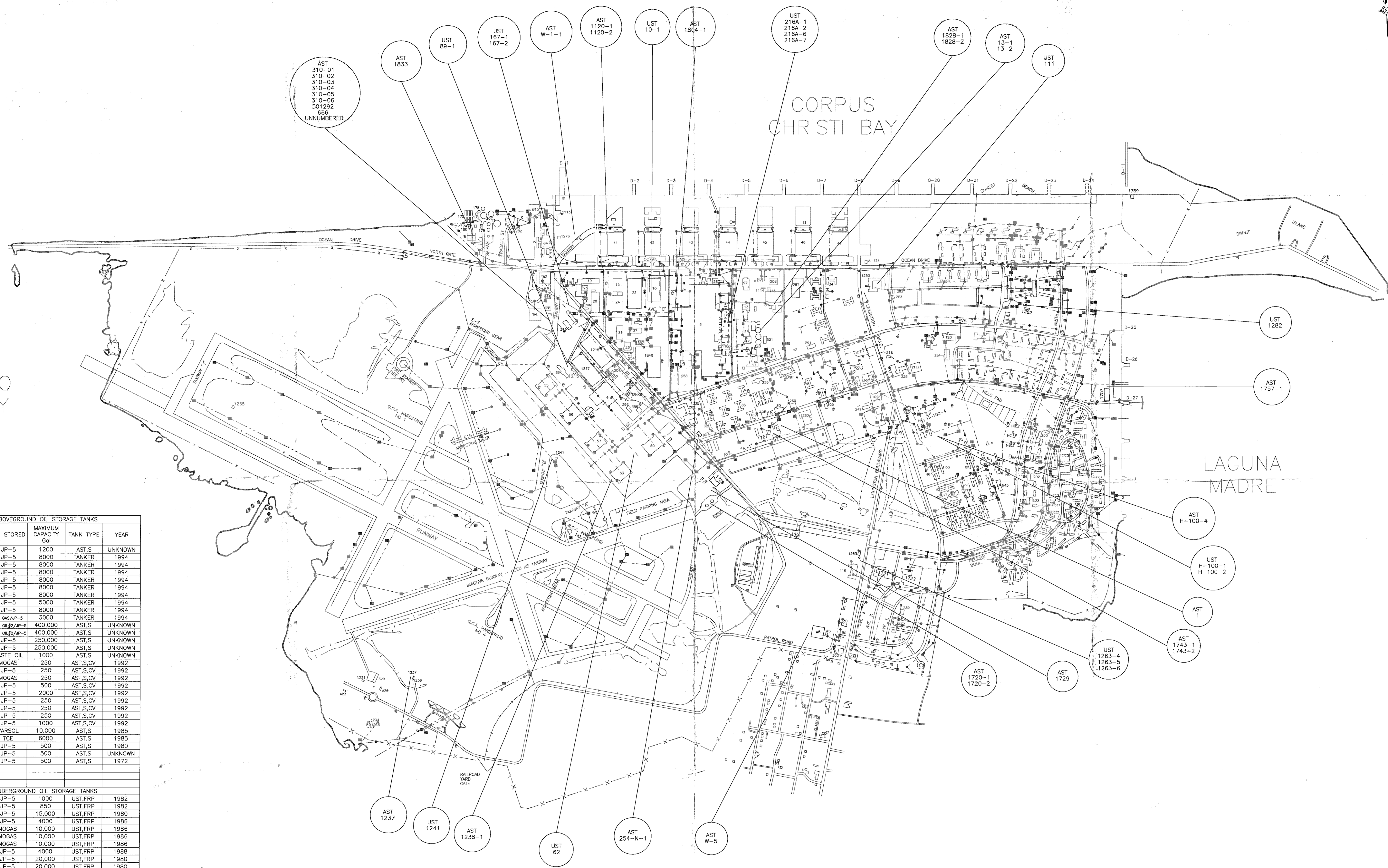
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- RAILROAD
- WATER FRONT
- WETLANDS
- FIRE HYDRANT

600 0 600  
SCALE FEET

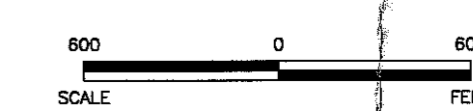
	
NAS CORPUS CHRISTI OHS CONTINGENCY PLAN	
BASE MAP NAS CORPUS CHRISTI	
Dr by: CHRIS TRIPLETT	Tr by:
Ch by: ELTON GRIGGS	App by: R. BARLOW
Date: 01/12/94	DWG Name: 0505MAP2
Sheet 1	Of 1




ABOVEGROUND OIL STORAGE TANKS				
TANK NO	OIL STORED	MAXIMUM CAPACITY Gal	TANK TYPE	YEAR
1833	JP-5	1200	AST,S	UNKNOWN
310-1	JP-5	8000	TANKER	1994
310-2	JP-5	8000	TANKER	1994
310-3	JP-5	8000	TANKER	1994
310-4	JP-5	8000	TANKER	1994
310-5	JP-5	8000	TANKER	1994
310-6	JP-5	8000	TANKER	1994
501292	JP-5	5000	TANKER	1994
666	JP-5	8000	TANKER	1994
UNNUMBERED	MO GAS/JP-5	3000	TANKER	1994
13-1	FUEL OIL #2/JP-5	400,000	AST,S	UNKNOWN
13-2	FUEL OIL #2/JP-5	400,000	AST,S	UNKNOWN
1720-1	JP-5	250,000	AST,S	UNKNOWN
1720-2	JP-5	250,000	AST,S	UNKNOWN
W-5	WASTE OIL	1000	AST,S	UNKNOWN
1743-1	MOGAS	250	AST,S,CV	1992
1743-2	JP-5	250	AST,S,CV	1992
1757-1	MOGAS	250	AST,S,CV	1992
W-1-1	JP-5	500	AST,S,CV	1992
H-100-4	JP-5	2000	AST,S,CV	1992
254-N-1	JP-5	250	AST,S,CV	1992
1238-1	JP-5	250	AST,S,CV	1992
1729-1	JP-5	250	AST,S,CV	1992
1804-1	JP-5	1000	AST,S,CV	1992
1828-1	VARISOL	10,000	AST,S	1985
1828-2	TCE	6000	AST,S	1985
1237	JP-5	500	AST,S	1980
1120-1	JP-5	500	AST,S	UNKNOWN
1120-2	JP-5	500	AST,S	1972
UNDERGROUND OIL STORAGE TANKS				
62	JP-5	1000	UST,FRP	1982
111	JP-5	850	UST,FRP	1982
1282	JP-5	15,000	UST,FRP	1980
89-1	JP-5	4000	UST,FRP	1986
1263-4	MOGAS	10,000	UST,FRP	1986
1263-5	MOGAS	10,000	UST,FRP	1986
1263-6	MOGAS	10,000	UST,FRP	1986
10-1	JP-5	4000	UST,FRP	1988
H-100-1	JP-5	20,000	UST,FRP	1980
H-100-2	JP-5	20,000	UST,FRP	1980
216A-1	VARISOL	13,000	UST,S	1943
216A-2	JP-4	13,000	UST,S	1943
216A-6	JP-4	3000	UST,S	1963
216A-7	JP-4	3000	UST,S	1963
1241	JP-5	500	UST,S	1965
167-1	MOGAS	10,000	UST,V	1993
167-2	JP-5	10,000	UST,V	1993
KEY TO TANK TYPE COLUMN				
DBWL=DOUBLE WALL				
FRP=FIBERGLASS REINFORCED PLASTIC				
V=VAULTED				
S=STEEL				



LEGEND	
—	FENCE
—	RAILROAD
—	WATER FRONT
—	WETLANDS
—	STORM SEWER SYSTEM
—	SANITARY SEWER SYSTEM
—	FIRE HYDRANT



		NAS CORPUS CHRISTI OHS CONTINGENCY PLAN	
AST & UST STORAGE LOCATIONS NAS CORPUS CHRISTI			
Dr by: CCC	Tr by:		
Ok by: ELTON GRIGGS	App by: R. BARLOW	Sheet	1
Date: 08/14/98	DWG Name: 91AUSL01	Of	1

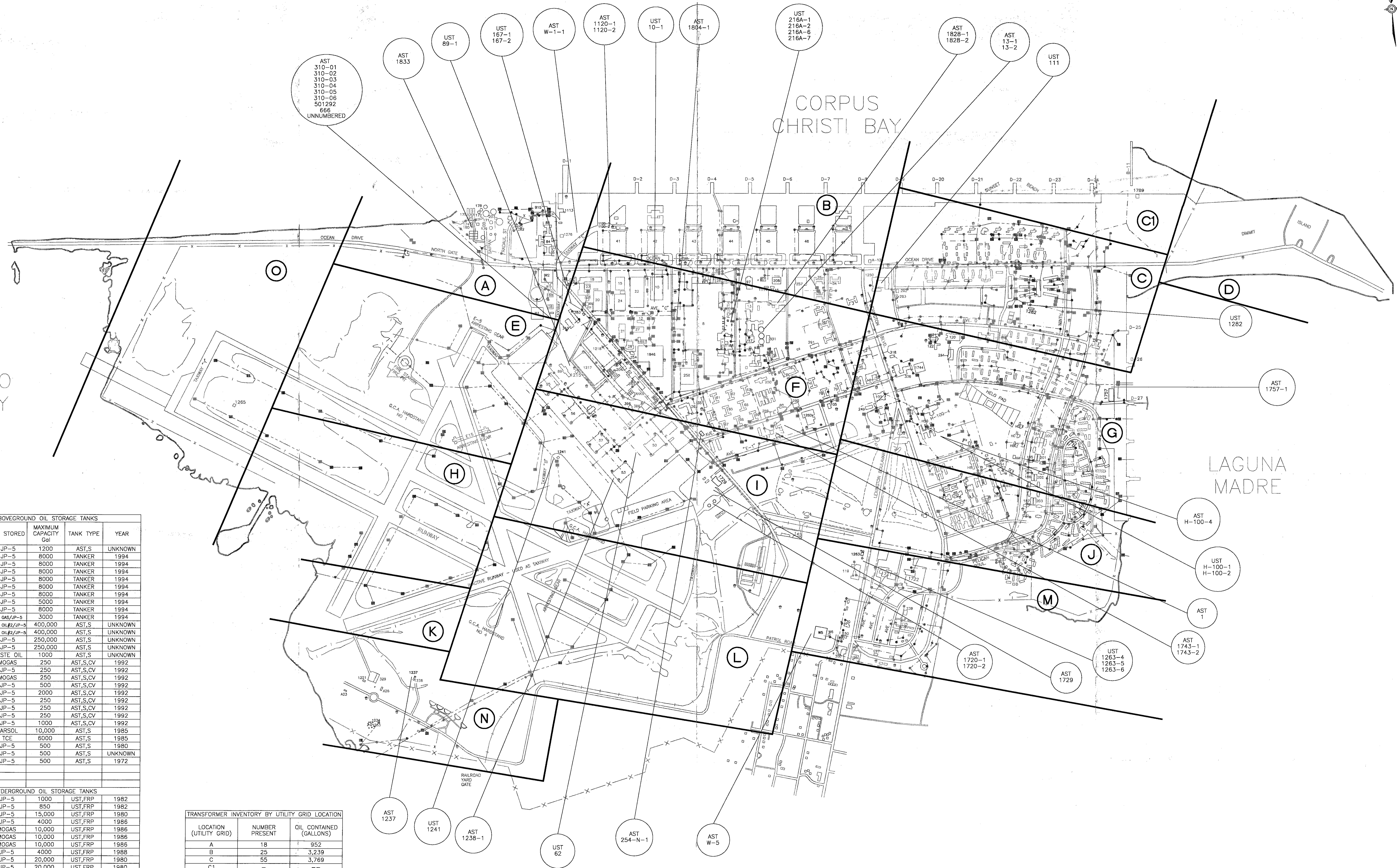
ABOVEGROUND OIL STORAGE TANKS				
TANK NO	OIL STORED	MAXIMUM CAPACITY Gal	TANK TYPE	YEAR
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310-4	JP-5	8000	TANKER	1994
310-5	JP-5	8000	TANKER	1994
310-6	JP-5	8000	TANKER	1994
501292	JP-5	5000	TANKER	1994
666	JP-5	8000	TANKER	1994
UNNUMBERED	MO GAS/JP-5	3000	TANKER	1994
13-1	FUEL OIL #2/JP-5	400,000	AST,S	UNKNOWN
13-2	FUEL OIL #2/JP-5	400,000	AST,S	UNKNOWN
1720-1	JP-5	250,000	AST,S	UNKNOWN
1720-2	JP-5	250,000	AST,S	UNKNOWN
W-5	WASTE OIL	1000	AST,S	UNKNOWN
1743-1	MOGAS	250	AST,S,CV	1992
1743-2	JP-5	250	AST,S,CV	1992
1757-1	MOGAS	250	AST,S,CV	1992
W-1-1	JP-5	500	AST,S,CV	1992
H-100-4	JP-5	2000	AST,S,CV	1992
254-N-1	JP-5	250	AST,S,CV	1992
1238-1	JP-5	250	AST,S,CV	1992
1729-1	JP-5	250	AST,S,CV	1992
1804-1	JP-5	1000	AST,S,CV	1992
1828-1	VARISOL	10,000	AST,S	1985
1828-2	TCE	6000	AST,S	1985
1237	JP-5	500	AST,S	1980
1120-1	JP-5	500	AST,S	UNKNOWN
1120-2	JP-5	500	AST,S	1972

UNDERGROUND OIL STORAGE TANKS				
TANK NO	OIL STORED	MAXIMUM CAPACITY Gal	TANK TYPE	YEAR
62	JP-5	1000	UST,FRP	1982
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1282	JP-5	15,000	UST,FRP	1980
89-1	JP-5	4000	UST,FRP	1986
1263-4	MOGAS	10,000	UST,FRP	1986
1263-5	MOGAS	10,000	UST,FRP	1986
1263-6	MOGAS	10,000	UST,FRP	1986
10-1	JP-5	4000	UST,FRP	1988
H-100-1	JP-5	20,000	UST,FRP	1980
H-100-2	JP-5	20,000	UST,FRP	1980
216A-1	VARISOL	13,000	UST,S	1943
216A-2	JP-4	13,000	UST,S	1943
216A-6	JP-4	3000	UST,S	1963
216A-7	JP-4	3000	UST,S	1963
1241	JP-5	500	UST,S	1965
167-1	MOGAS	10,000	UST,V	1993
167-2	JP-5	10,000	UST,V	1993

KEY TO TANK TYPE COLUMN  
 DBWL=DOUBLE WALL  
 FRP=FIBERGLASS REINFORCED PLASTIC  
 V=VAULTED  
 S=STEEL

TRANSFORMER INVENTORY BY UTILITY GRID LOCATION		
LOCATION (UTILITY GRID)	NUMBER PRESENT	OIL CONTAINED (GALLONS)
A	18	952
B	25	3,239
C	55	3,769
D	3	175
E	—	—
F	64	5,675
G	90	5,628
H	8	50
I	39	2,859
J	31	675
K	—	—
L	3	62
M	10	907
N	—	—
O	7	44
TOTALS	353	24,035

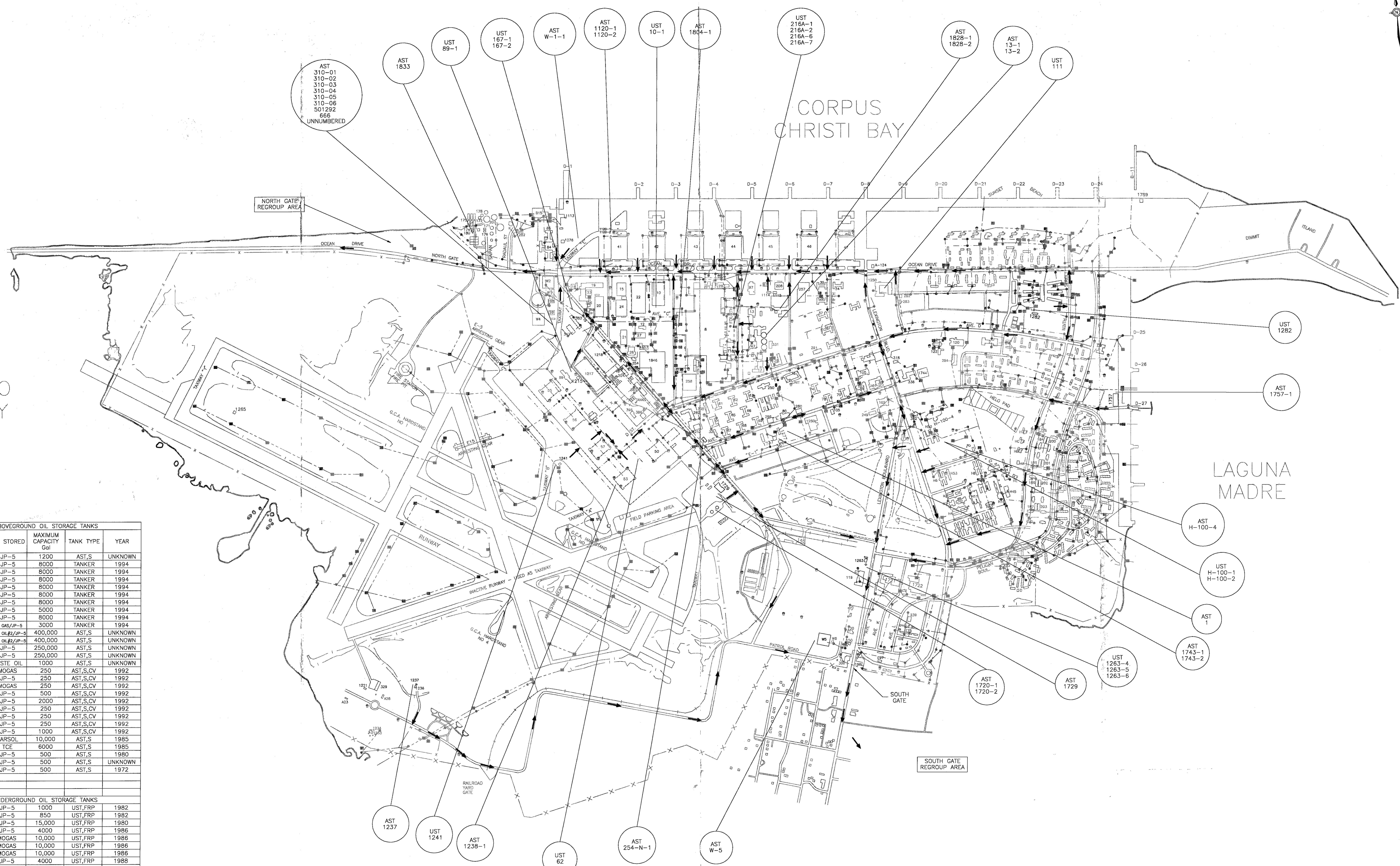
NOTE: SOURCE OF DATA: INVENTORY CARDS AS OF 3/96



NAS CORPUS CHRISTI OHS CONTINGENCY PLAN	
TRANSFORMER INVENTORY BY UTILITY GRID LOCATION NAS CORPUS CHRISTI	
Dr by: CCC Ck by: ELTON GRIGGS Date: 08/14/96	Tr by: App by: R. BARLOW DWG Name: 91TUGL1
Sheet 1	Of 1

ABOVEGROUND OIL STORAGE TANKS				
TANK NO	OIL STORED	MAXIMUM CAPACITY GSI	TANK TYPE	YEAR
1833	JP-5	1200	AST,S	UNKNOWN
310-1	JP-5	8000	TANKER	1994
310-2	JP-5	8000	TANKER	1994
310-3	JP-5	8000	TANKER	1994
310-4	JP-5	8000	TANKER	1994
310-5	JP-5	8000	TANKER	1994
310-6	JP-5	8000	TANKER	1994
501292	JP-5	5000	TANKER	1994
666	JP-5	8000	TANKER	1994
UNNUMBERED	MO GAS/JP-5	3000	TANKER	1994
13-1	FUEL OIL #2/JP-5	400,000	AST,S	UNKNOWN
13-2	FUEL OIL #2/JP-5	400,000	AST,S	UNKNOWN
1720-1	JP-5	250,000	AST,S	UNKNOWN
1720-2	JP-5	250,000	AST,S	UNKNOWN
W-5	WASTE OIL	1000	AST,S	UNKNOWN
1743-1	MOGAS	250	AST,S,CV	1992
1743-2	JP-5	250	AST,S,CV	1992
1757-1	MOGAS	250	AST,S,CV	1992
W-1-1	JP-5	500	AST,S,CV	1992
H-100-4	JP-5	2000	AST,S,CV	1992
254-N-1	JP-5	250	AST,S,CV	1992
1238-1	JP-5	250	AST,S,CV	1992
1729-1	JP-5	250	AST,S,CV	1992
1804-1	JP-5	1000	AST,S,CV	1992
1828-1	VARISOL	10,000	AST,S	1985
1828-2	TCE	6000	AST,S	1985
1237	JP-5	500	AST,S	1980
1120-1	JP-5	500	AST,S	UNKNOWN
1120-2	JP-5	500	AST,S	1972
UNDERGROUND OIL STORAGE TANKS				
TANK NO	OIL STORED	MAXIMUM CAPACITY GSI	TANK TYPE	YEAR
62	JP-5	1000	UST,FRP	1982
111	JP-5	850	UST,FRP	1982
1282	JP-5	15,000	UST,FRP	1980
89-1	JP-5	4000	UST,FRP	1986
1263-4	MOGAS	10,000	UST,FRP	1986
1263-5	MOGAS	10,000	UST,FRP	1986
1263-6	MOGAS	10,000	UST,FRP	1986
10-1	JP-5	4000	UST,FRP	1988
H-100-1	JP-5	20,000	UST,FRP	1980
H-100-2	JP-5	20,000	UST,FRP	1980
216A-1	VARISOL	13,000	UST,S	1943
216A-2	JP-4	13,000	UST,S	1943
216A-6	JP-4	3000	UST,S	1963
216A-7	JP-4	3000	UST,S	1963
1241	JP-5	500	UST,S	1965
167-1	MOGAS	10,000	UST,V	1993
167-2	JP-5	10,000	UST,V	1993

KEY TO TANK TYPE COLUMN  
 DBWL=DOUBLE WALL  
 FRP=FIBERGLASS REINFORCED PLASTIC  
 V=VAULTED  
 S=STEEL



**LEGEND**

- FENCE
- RAILROAD
- WATER FRONT
- WETLANDS
- STORM SEWER SYSTEM
- SANITARY SEWER SYSTEM
- FIRE HYDRANT
- EQUIPMENT/EVACUATION ROUTES
- DEPENDS ON HAZARD LOCATION

SCALE: 0 600 FEET

**NAS CORPUS CHRISTI OHS CONTINGENCY PLAN**

**EVACUATION AND EQUIPMENT HAUL ROUTE NAS CORPUS CHRISTI**

Dr. by: CCC      Tr. by:      App. by: R. BARLOW      Sheet 1  
 Ck. by: ELTON GRIGGS      Date: 01/09/97      DWG Name: 50HAULRT      Of 1

ABOVEGROUND OIL STORAGE TANKS				
TANK NO	OIL STORED	MAXIMUM CAPACITY	TANK TYPE	YEAR
1833	JP-5	1200	AST, S	UNKNOWN
310-1	JP-5	8000	TANKER	1994
310-2	JP-5	8000	TANKER	1994
310-3	JP-5	8000	TANKER	1994
310-4	JP-5	8000	TANKER	1994
310-5	JP-5	8000	TANKER	1994
310-6	JP-5	8000	TANKER	1994
501292	JP-5	5000	TANKER	1994
666	JP-5	8000	TANKER	1994
UNNUMBERED	MO GAS/JP-5	3000	TANKER	1994
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1720-2	JP-5	250,000	AST, S	UNKNOWN
W-5	WASTE OIL	1000	AST, S	UNKNOWN
1743-1	MOGAS	250	AST, S, CV	1992
1743-2	JP-5	250	AST, S, CV	1992
1757-1	MOGAS	250	AST, S, CV	1992
W-1-1	JP-5	500	AST, S, CV	1992
H-100-4	JP-5	2000	AST, S, CV	1992
254-N-1	JP-5	250	AST, S, CV	1992
1238-1	JP-5	250	AST, S, CV	1992
1729-1	JP-5	250	AST, S, CV	1992
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1120-1	JP-5	500	AST, S	UNKNOWN
1120-2	JP-5	500	AST, S	1972
UNDERGROUND OIL STORAGE TANKS				
62	JP-5	1000	UST, FRP	1982
111	JP-5	850	UST, FRP	1982
1282	JP-5	15,000	UST, FRP	1980
89-1	JP-5	4000	UST, FRP	1986
1263-4	MOGAS	10,000	UST, FRP	1986
1263-5	MOGAS	10,000	UST, FRP	1986
1263-6	MOGAS	10,000	UST, FRP	1986
10-1	JP-5	4000	UST, FRP	1988
H-100-1	JP-5	20,000	UST, FRP	1980
H-100-2	JP-5	20,000	UST, FRP	1980
216A-1	VARISOL	13,000	UST, S	1943
216A-2	JP-4	13,000	UST, S	1943
216A-6	JP-4	3000	UST, S	1963
216A-7	JP-4	3000	UST, S	1963
1241	JP-5	500	UST, S	1965
167-1	MOGAS	10,000	UST, V	1993
167-2	JP-5	10,000	UST, V	1993

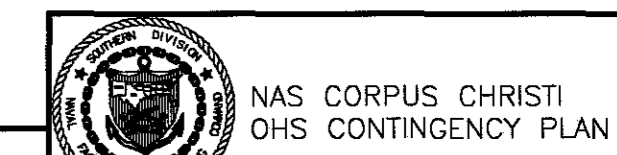
KEY TO TANK TYPE COLUMN  
 DBWL-DOUBLE WALL  
 FRP-FIBERGLASS REINFORCED PLASTIC  
 V-VAULTED  
 S-STEEL

**A** NOTES:  
 POTENTIAL DRAINAGE DISTANCE LIMITED IN DRY SEASON DUE TO FLATNESS OF GENERAL AREA.  
 DURING RAINY PERIODS, POTENTIAL FLOW DISTANCE INCREASES WITH SURFACE RUNOFF. NEAREST STORM WATER CULVERTS, DRAINAGE DITCHES AND OUTFALLS SHOULD BE BOOMED TO REDUCE SPILL IMPACT.

**B** NOTES:  
 1) SURFACE DITCHES ARE GRASS LINED  
 2) SUBSURFACE DRAINAGE SYSTEM CONSISTS OF CONCRETE PIPING.  
 3) OVERALL DRAINAGE SYSTEM HAS NO WEIRS, BOOMS, SHUT-OFF VALVES, SUMP PUMPS, SEPARATORS, OR OTHER CLEANUP MATERIALS.

LEGEND  
 - FENCE  
 - RAILROAD  
 - WATER FRONT  
 - WETLANDS  
 - STORM SEWER SYSTEM  
 - SANITARY SEWER SYSTEM  
 - FIRE HYDRANT  
 - POTENTIAL SPILL FLOW ROUTES

600 0 600  
 SCALE FEET



NAS CORPUS CHRISTI  
 OHS CONTINGENCY PLAN

GENERALIZED POTENTIAL SPILL FLOW ROUTES  
 FOR ASTs AND SELECT USTs  
 NAS CORPUS CHRISTI

Dr by: CCC  
 App by: ELTON GRIGGS  
 Date: 08/14/96  
 Tr by: R. BARLOW  
 App by: R. BARLOW  
 DWG Name: 91GSPR1  
 Sheet 1  
 Of 1

OSO  
BAY

CORPUS  
CHRISTI BAY

LAGUNA  
MADRE

ABOVEGROUND OIL STORAGE TANKS				
TANK NO	OIL STORED	MAXIMUM CAPACITY Gal	TANK TYPE	YEAR
1833	JP-5	1200	AST,S	UNKNOWN
310-1	JP-5	8000	TANKER	1994
310-2	JP-5	8000	TANKER	1994
310-3	JP-5	8000	TANKER	1994
310-4	JP-5	8000	TANKER	1994
310-5	JP-5	8000	TANKER	1994
310-6	JP-5	8000	TANKER	1994
501292	JP-5	5000	TANKER	1994
666	JP-5	8000	TANKER	1994
UNNUMBERED	MO GAS/JP-5	3000	TANKER	1994
13-1	FUEL OIL #2/JP-5	400,000	AST,S	UNKNOWN
13-2	FUEL OIL #2/JP-5	400,000	AST,S	UNKNOWN
1720-1	JP-5	250,000	AST,S	UNKNOWN
1720-2	JP-5	250,000	AST,S	UNKNOWN
W-5	WASTE OIL	1000	AST,S,CV	UNKNOWN
1743-1	MOGAS	250	AST,S,CV	1992
1743-2	JP-5	250	AST,S,CV	1992
1757-1	MOGAS	250	AST,S,CV	1992
W-1-1	JP-5	500	AST,S,CV	1992
H-100-4	JP-5	2000	AST,S,CV	1992
254-N-1	JP-5	250	AST,S,CV	1992
1238-1	JP-5	250	AST,S,CV	1992
1729-1	JP-5	250	AST,S,CV	1992
1804-1	JP-5	1000	AST,S,CV	1992
1828-1	VARISOL	10,000	AST,S	1985
1828-2	TCE	6000	AST,S	1985
1237	JP-5	500	AST,S	1980
1120-1	JP-5	500	AST,S	UNKNOWN
1120-2	JP-5	500	AST,S	1972

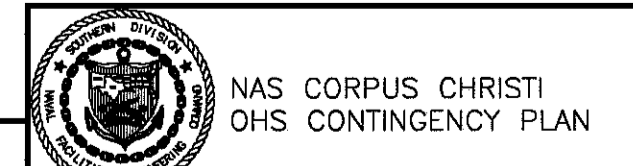
UNDERGROUND OIL STORAGE TANKS				
62	JP-5	1000	UST,FRP	1982
111	JP-5	850	UST,FRP	1982
1282	JP-5	15,000	UST,FRP	1980
89-1	JP-5	4000	UST,FRP	1986
1263-4	MOGAS	10,000	UST,FRP	1986
1263-5	MOGAS	10,000	UST,FRP	1986
1263-6	MOGAS	10,000	UST,FRP	1986
10-1	JP-5	4000	UST,FRP	1988
H-100-1	JP-5	20,000	UST,FRP	1980
H-100-2	JP-5	20,000	UST,FRP	1980
216A-1	VARISOL	13,000	UST,S	1943
216A-2	JP-4	13,000	UST,S	1943
216A-6	JP-4	3000	UST,S	1963
216A-7	JP-4	3000	UST,S	1963
1241	JP-5	500	UST,S	1965
167-1	MOGAS	10,000	UST,V	1993
167-2	JP-5	10,000	UST,V	1993

KEY TO TANK TYPE COLUMN  
DBWL=DOUBLE WALL  
FRP=FIBERGLASS REINFORCED PLASTIC  
V=VAULTED  
S=STEEL

- LEGEND
- FENCE
  - RAILROAD
  - WATER FRONT
  - WETLANDS
  - STORM SEWER SYSTEM
  - SANITARY SEWER SYSTEM
  - FIRE HYDRANT
  - POTENTIAL DRAINAGE FLOW

600 0 600  
SCALE FEET

- NOTE:
- 1) SURFACE DITCHES ARE GRASS LINED
  - 2) SUBSURFACE DRAINAGE SYSTEM CONSISTS OF CONCRETE PIPING.
  - 3) OVERALL DRAINAGE SYSTEM HAS NO WEIRS, BOOMS, SHUT-OFF VALVES, SUMP PUMPS, SEPARATORS, OR OTHER CLEANUP MATERIALS.



DRAINAGE SYSTEM: POTENTIAL STORM AND  
SANITARY SEWER SYSTEM FLOW DIRECTION  
NAS CORPUS CHRISTI

Dr by: CCC	Tr by:	Sheet 1
Ch by: ELTON GRIGGS	App by: R. BARLOW	91 1
Date: 08/15/96	DWG Name: 91055501	

# NUECES COUNTY TEXAS

SCALE IN MILES  
0 1 2 3 4

1969

1980 CENSUS FIGURES

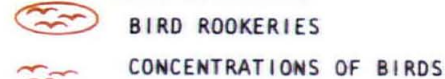
HIGHWAYS REVISED TO FEBRUARY 1, 1982

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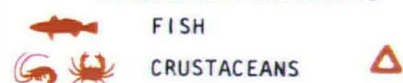
## RARE, THREATENED, AND ENDANGERED SPECIES HABITATS



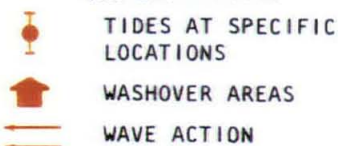
## BIRD HABITATS



## PRIME FISH AND SHELLFISH GROUNDS



## COASTAL HYDROGRAPHIC INFORMATION



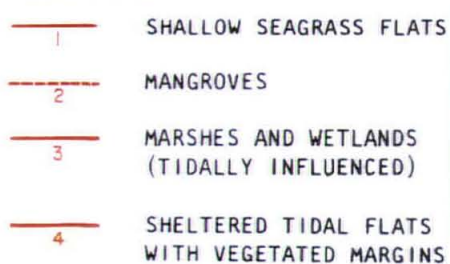
## LOGISTICAL FEATURES



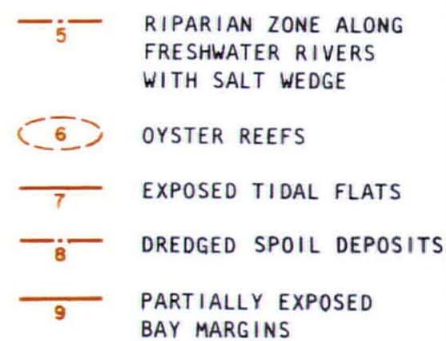
\*M = Municipal I = Industrial

## COASTAL SENSITIVITY INDEX

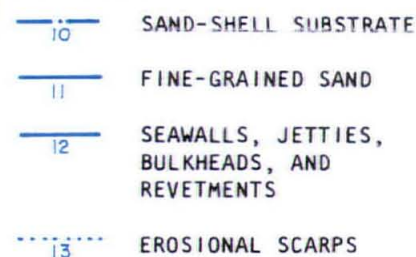
### HIGH IMPACT



### MODERATE IMPACT



### LOW IMPACT

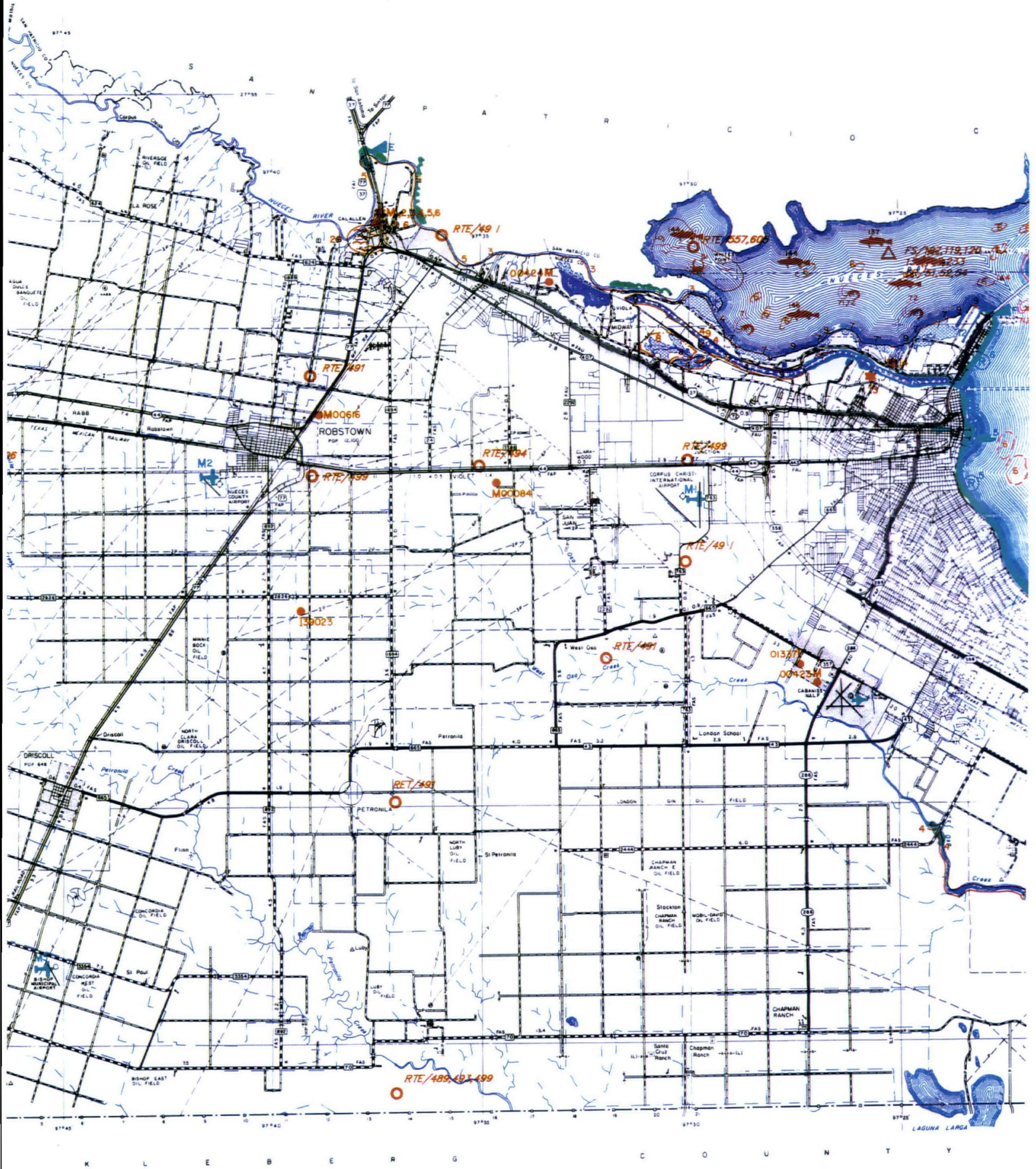


Texas Water Commission  
Post Office Box 13087  
Austin, Texas 78711

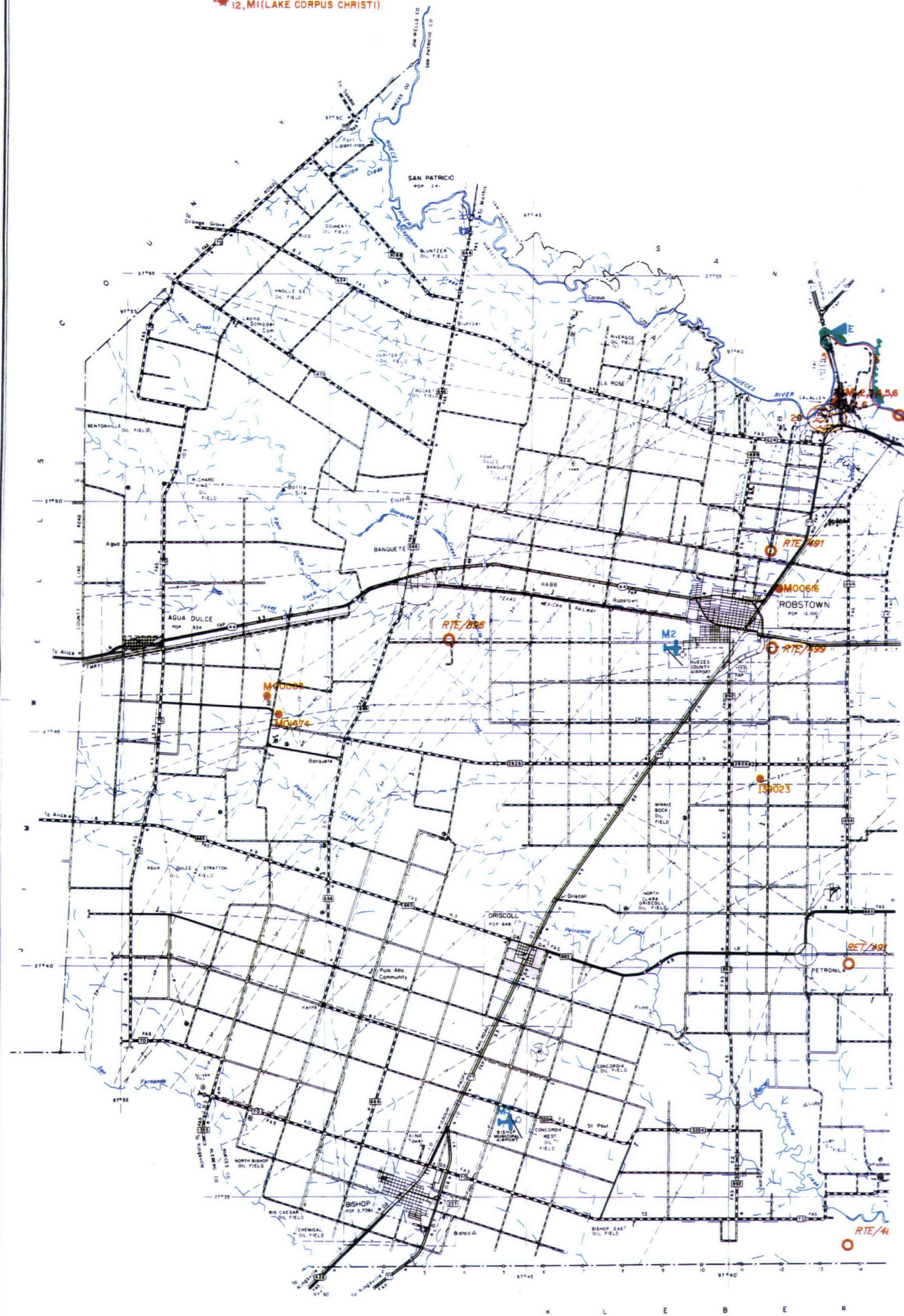
KEY TO SUPPLEMENTARY SHEETS

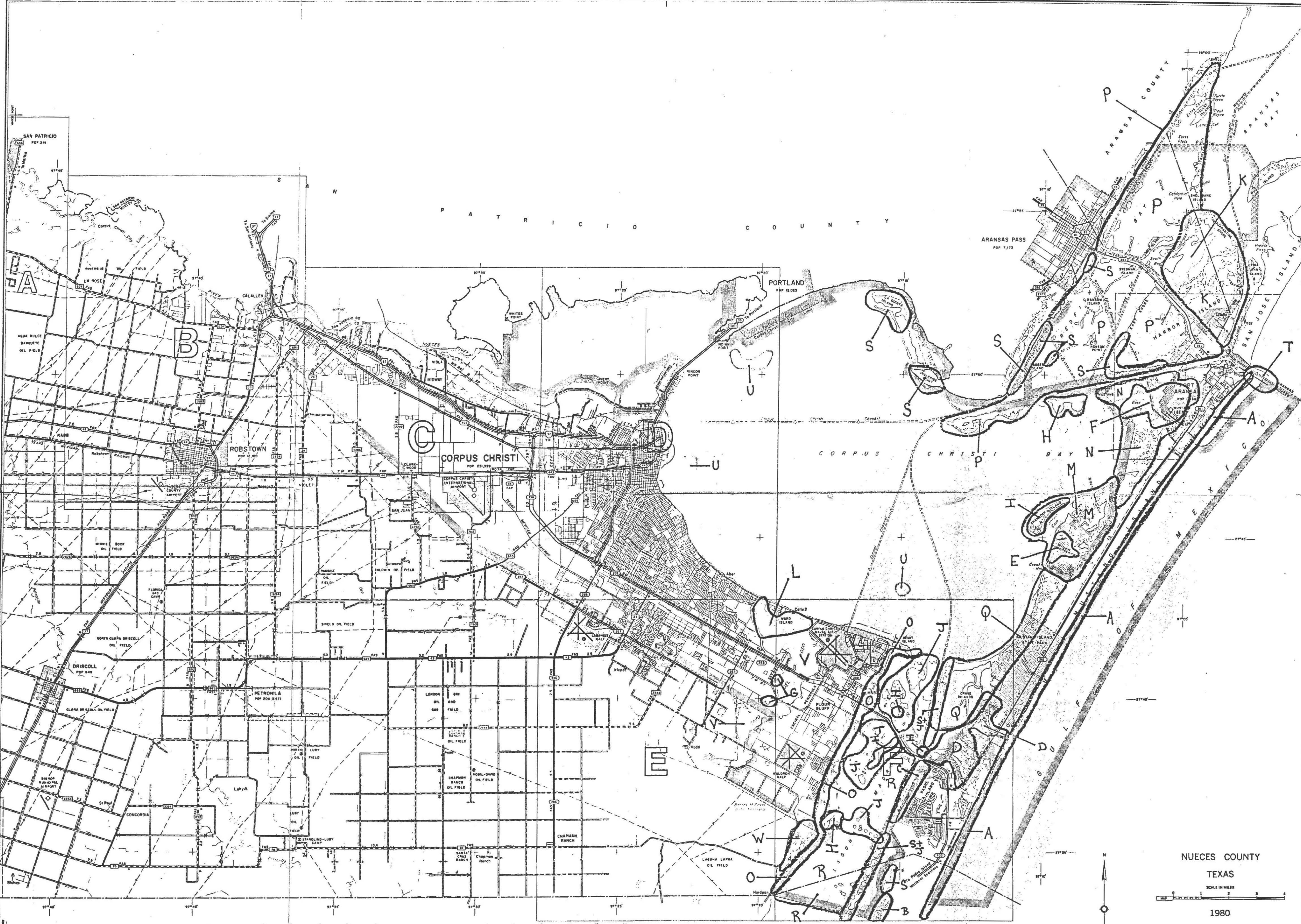
KEY TO BASE SHEETS

Sheet 2 of 2 base sheets and 4 supplementary sheets



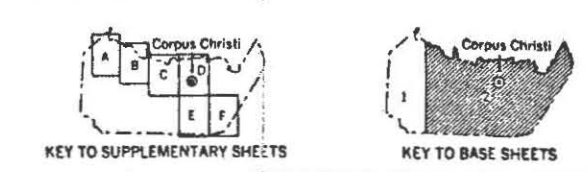
12, MI (LAKE CORPUS CHRISTI)





NUECES COUNTY  
TEXAS  
SCALE IN MILES  
1980  
1980 CENSUS FIGURES  
HIGHWAYS REVISED TO FEBRUARY 1, 1989  
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from the State Department of Highways and Public Transportation,  
P.O. Box 5051, Austin, Texas 78763  
Sheet 2 of 2 Base Sheets and 6 Supplementary Sheets

NOTICE  
This map has been prepared for internal departmental use and  
has no official status. Accuracy is limited to validity of available  
data as of the dates shown.



**ANNEX 1 — HAZARDOUS SUBSTANCE SITE-SPECIFIC PLAN**

## **ANNEX 1 — HAZARDOUS SUBSTANCE SITE-SPECIFIC PLAN**

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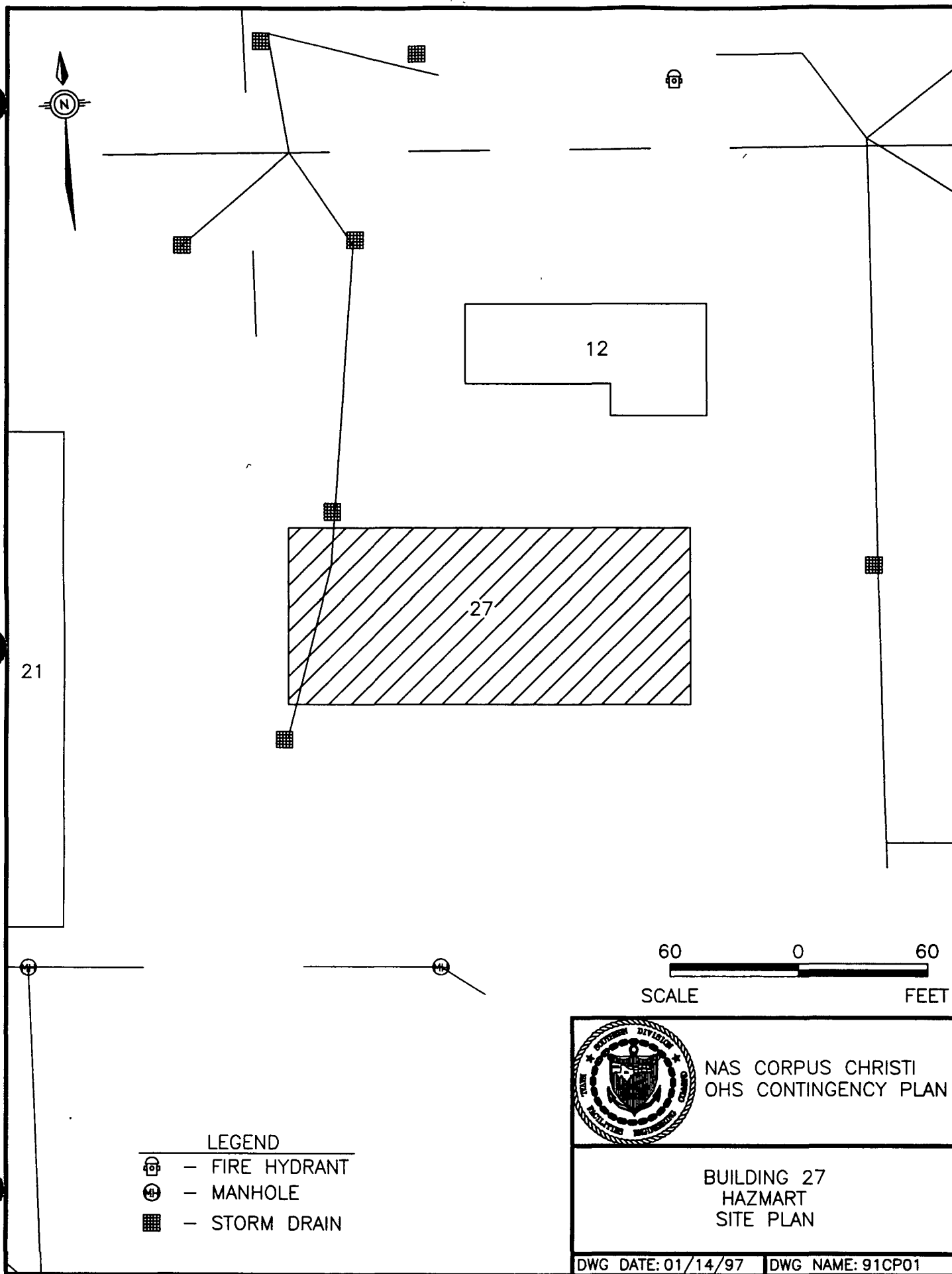
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# ANNEX 1 — HAZARDOUS SUBSTANCE SITE-SPECIFIC PLAN

<b>Immediate Spill Response Emergency Action Plan</b>			
<b>Naval HAZMART Program - Building 27</b>			
<b>WARNING:</b> Designated personnel at this facility have been specifically tasked, trained, and equipped to respond to oil and hazardous substance spills. Unauthorized individuals shall never undertake the response to or investigation of any actual or suspected oil or hazardous substance spills			
<b>I. IMMEDIATELY REPORT</b> spills by the most expeditious means (e.g., voice, telephone) to your supervisor, or contact the <b>FACILITY EMERGENCY COORDINATOR</b> as listed below:			
<b>Facility Emergency Coordinator</b>	<b>Shop</b>	<b>Title</b>	<b>Phone Ext.</b>
CW04 England	HazMart	HazMart Coordinator	4318
<b>IF CONTACT CANNOT BE MADE WITH THE FACILITY EMERGENCY COORDINATOR, REPORT SPILLS IMMEDIATELY to:</b>  <b>FIRE DEPARTMENT EXT. 3333</b>  Number of persons working at this site: 10			
<b>II. FIRE SAFETY PLAN</b>			
<b>A. Equipment</b>			
Emergency response is initiated by fire alarm or telephone in the office. Building 27 is equipped with automatically or manually activated fire suppression system or heat and smoke detectors. Fire extinguisher and alarms are located throughout each facility and at each exit.			
<b>B. Building Construction/Activity Description</b>			
Building 27 is a cinder block building with metal roof deck and concrete deck which houses supply offices and warehouse area. The facility on First Street is operated by the Supply Department and is used as the HazMart facility which supplies NAS tenants with hazardous materials. Hazardous materials stored at this facility are stored in a secured albeit noncontained warehouse area. The storage area is not constructed to isolate spilled material from other materials stored in the area.			

<b>Immediate Spill Response Emergency Action Plan</b>	
<b>Naval HAZMART Program - Building 27</b>	
<b>III. SITE HAZARDOUS SUBSTANCE INFORMATION</b>	
<b>A. Inventory</b>	
<p>Typical categories of materials stored in Building 27 include paints, flammable solvents, chlorinated solvents, adhesives, acids, and oxidizers. The inventories maintained at this location are primarily in daily or weekly use quantities of less than 5-gallons although some large quantity containers of hazardous substances are inventoried at this facility.</p> <p>Typical categories of materials used and stored in Building 27 are listed in Table Annex 1 - 1.0. The Hazardous Substance Inventory lists the materials approved for storage at these facilities as of 1 November 1994.</p>	
<b>B. Probable Spill Route</b>	
<p>The following spill scenarios were identified as most likely at Building 27:</p> <p><u>Spill of Hazardous Substance inside the Building:</u></p> <p>The specific materials stored in this area are clearly identified by appropriate labeling. The maximum spill potential for this site is approximately 55 gallons. The inside storage area is bermed and sloped to effectively contain the maximum spill volume. Incompatible materials stored in the area may not be separated by distance or effective containment berming.</p> <p><u>Spill of Hazardous Substance in Loading Area:</u></p> <p>The maximum spill potential within this area is 55 gallons. A spill in this area would likely be contained within the HazMart compound on the asphalt loading area.</p>	
<b>C. Spill Response Equipment and Materials</b>	
A 55-gallon spill kit is in Building 27.	

Last updated: ~~November 1994~~



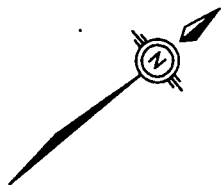
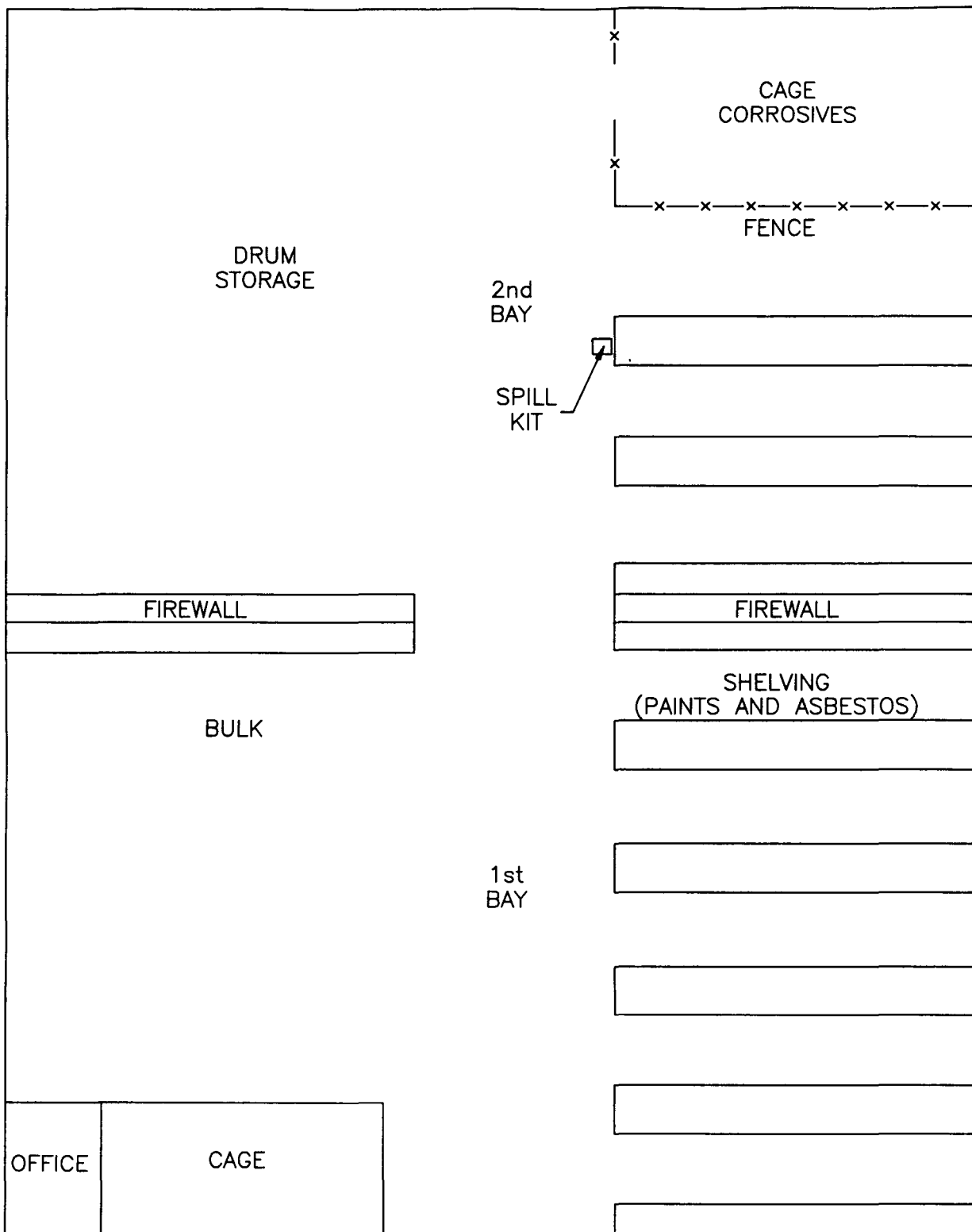
- LEGEND
-  - FIRE HYDRANT
  -  - MANHOLE
  -  - STORM DRAIN



NAS CORPUS CHRISTI  
OHS CONTINGENCY PLAN

BUILDING 27  
HAZMART  
SITE PLAN

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NAS CORPUS CHRISTI  
OHS CONTINGENCY PLAN

BUILDING 27  
HAZMART  
SITE PLAN

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**List Annex 1 - 1.0**  
**HAZMART Program**  
**Hazardous Substance Inventory**

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PCRA\_R3  
11/06/95

Navy EPCRA System  
Corpus Christi  
EPCRA Inventory by Work Center

Page: 78  
Time: 17:03

WORK CENTER	BLDG NO	FSC	NIIN	CAGE	PRODUCT (ITEM) NAME	ISSUE	CONT	S.GRAV	QUANT.	LBS/UNIT	CAS #	CONSTITUENT	EH5 R	
GOLF COURSE	1743	CCHS	LLP002362	00000	REGAL HD GREENS - 26-0-22	33	LBS	1.00	8	33.00	57-13-6	UREA	2	
											584-08-7	POTASSIUM CARBONATE	22	
											14797-55-8	Nitrate (as N)	6	
													----	
													30	
GOLF COURSE	1748	CCHS	LLP002266	00000	CERTIFEN III	2.5	GAL	1.08	4	22.52	91-20-3	Naphthalene	20	
											107-41-5	Hexylene Glycol	20	
											314-40-9	Bromacil	20	
											64742-94-5	HEAVY AROMATIC SOLVENT NAPHTHA	20	
													----	
													80	
GOLF COURSE	1748	CCHS	LLP002267	00000	DEEP PENETRANT	2.5	GAL	1.01	6	21.06	67-63-0	Isopropanol	20	
													----	
													20	
IAZMAT	27	3439	002243573	86337	BRAZING ALLOY,SILVER			9.11	3	0.00	7440-22-4	Silver	45	
											7440-50-8	Copper	30	
											7440-66-6	Zinc	25	
													----	
													100	
IAZMAT	27	3439	004693398	82925	FLUX, SOLDERING	1/2	QT	1.13	2	1.18	***** No Constituents Found *****			

0

HAZMAT

27

3439 010087577 52329 SOLDER, TIN ALLOY

1 GAL

11.30

20

94.24

7429-90-5 Aluminum

7439-86-6 IRON

7439-92-1 Lead

7440-31-5 Tin

7440-36-0 Antimony

7440-38-2 Arsenic

7440-50-8 Copper

7440-66-6 Zinc

7440-69-9 Bismuth

8050-09-7 ROSIN

25265-71-8 PROPANOL, OXYBIS-(DIPROPYLENE

-----  
213

1

1

100

100

2

1

2

1

1

3

1

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WORK CENTER	BLDG NO	FSC	NIIN	CAGE	PRODUCT (ITEM) NAME	ISSUE	CONT	S.GRAV	QUANT.	LBS/UNIT	CAS #	CONSTITUENT	EHS	R	
IAZMAT	27	6750	000925054	19139	FIXING BATH, PHOTOGRAPHIC	1	GAL	1.35	6	11.26	64-19-7	Acetic acid	5		
											127-09-3	SODIUM ACETATE	5		
											7664-93-9	Sulfuric acid	14	X	X
											7732-18-5	Water	45		
											7757-83-7	SODIUM SULFITE	5		
											7783-18-8	Ammonium thiosulfate	50		
											10043-01-3	Aluminum sulfate	10		
											----		134		
IAZMAT	27	6810	002270410	0AN91	ISOPROPYL ALCOHOL,ACS	1	GAL	0.78	12	6.51	***** No Constituents Found *****				
											----				
											0				
IAZMAT	27	6810	002388119	4N760	NAPHTHA, ALIPHATIC	1	GAL	0.71	75	5.92	108-87-2	METHYL CYCLOHEXANE	0		
											108-88-3	Toluene	0		
											110-82-7	Cyclohexane	0		
											142-82-5	N-HEPTANE	0		
											----				
											0				
IAZMAT	27	6810	002499354	3A536	SULFURIC ACID,ELECTROLYTE *	1	GAL	1.28	62	10.68	7664-93-9	Sulfuric acid	37	X	
											7732-18-5	Water	63	X	
											----				
											100				

HAZMAT	27	6810 002812002 2W216 TOLUENE, TECHNICAL	1 GAL	0.87	24	7.26	108-88-3 Toluene	99 ----
		.						99
HAZMAT	27	6810 002812785 86961 METHYL ETHYL KETONE, TECHNICAL	1 GAL	0.81	54	6.76	78-93-3 2-Butanone (MEK)	0 ----
								0
HAZMAT	27	6810 007534993 0AN91 ISOPROPYL ALCOHOL, TECHNICAL	8 OZ	0.79	16	0.50	67-63-0 Isopropanol	99 ----
								99
HAZMAT	27	6810 008431640 82925 SULFURIC ACID, ELECTROLYTE	5 GAL	1.84	18	76.73	7332-18-5 WATER 7664-93-9 Sulfuric acid	1 37 x x ----- 38

EPCRA\_R3  
01/06/95

Navy EPCRA System  
Corpus Christi  
EPCRA Inventory by Work Center

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WORK CENTER	BLDG NO	FSC	NIIN	CAGE	PRODUCT (ITEM) NAME	ISSUE	CONT	S.GRAV	QUANT.	LBS/UNIT	CAS #	CONSTITUENT	EHS R
HAZMAT	27	6810	009838551	5W216	ISOPROPYL ALCOHOL, TECHNICAL	1	QT	0.79	20	1.65	67-63-0	Isopropanol	99 ----
													99
HAZMAT	27	6810	012209907	0AN91	ISOPROPYL ALCOHOL, TECHNICAL	1	GALLON	0.79	4	6.59	67-63-0	Isopropanol	99 ----
													99
HAZMAT	27	6830	005510854	1L164	CLEANING COMPOUND, SOLVENT, TRIC	200	LBS	1.57	10	200.00	76-13-1	Freon 113	100 ----
													100
HAZMAT	27	6830	005842957	1L164	CLEANING COMPOUND, SOLVENT, TRIC	100	LB	1.57	115	100.00	76-13-1	Freon 113	100 ----
													100
HAZMAT	27	6840	008237849	87664	INSECTICIDE, PYRETHRIN	CN		0.91	79	0.00	51-03-6	PIPERONYL BUTOXIDE	1
											113-48-4	N-OCTYL BICYCLOHEPTENE DICARBO	1
											8003-34-7	Pyrethrins and Pyrethroids	1
											999912-11-2	REFINED PETROLEUM OIL	8
											999913-37-1	SOLVENTS AND PROPELLANTS	90 ----
													101
HAZMAT	27	6840	010676674	14676	INSECTICIDE, D-PHENOTHRIN	12	OZ	1.15	106	0.75	75-69-4	Trichlorofluoromethane	1



EPCRA R3  
01/06/95

Navy EPCRA System  
Corpus Christi  
EPCRA Inventory by Work Center

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Time: 17:03

WORK CENTER	BLDG NO	FSC	NIIN	CAGE	PRODUCT (ITEM) NAME	ISSUE	CONT	S.GRAV	QUANT.	LBS/UNIT	CAS #	CONSTITUENT	ENS	R
HAZMAT	27	6850	001817929	0FGA3	ANTIFREEZE	1	GAL	1.12	222	9.34	107-21-1 Ethylene glycol 111-46-6 GLYCOL ETHERS, DIETHYLENE GLYC	90 0	----	90
HAZMAT	27	6850	002745421	0A9L8	DRY CLEANING SOLVENT	5	GAL	5.20	102	216.84	71-43-2 Benzene 64742-88-7 ALIPHATIC PETROLEUM DISTILLATE	0 100	----	100
HAZMAT	27	6850	002858011	0A9L8	DRY CLEANING SOLVENT	55	GAL	0.79	31	362.37	71-43-2 Benzene 64742-88-7 ALIPHATIC PETROLEUM DISTILLATE	0 100	----	100
HAZMAT	27	6850	007542672	62639	AK-031 ANTI-FOGGING COMPOUND			8.60	12	0.00	67-63-0 Isopropanol 34590-94-8 DIPROPYLENE GLYCOL METHYL ETHE	4 4	----	8
HAZMAT	27	6850	007822740	03530	INSPECTION PENETRANT KIT	12	OZ	0.98	12	0.75	75-45-6 CHLORODIFLUOROMETHANE 115-86-6 Triphenyl phosphate 117-81-7 bis(2-Ethylhexyl)phthalate (BE	16 1 60	----	77

HAZMAT	27	6850 010457931 77513 CLEANING COMPOUND,AIRCRAFT SUR	55 GAL	1.00	13	458.70	111-76-2 2-n-Butoxyethanol	1	
							112-34-5 2-(2-Butoxyethoxy) ethanol	0	
							1300-72-7 SODIUM XYLENE SULFONATE	0	
							1310-58-3 Potassium hydroxide	3	
							7664-41-7 Ammonia	1	
							64742-88-7 ALIPHATIC PETROLEUM DISTILLATE	0	
							999902-12-8 AROMATIC PETROLEUM SOLVENT	25	
							----	30	
HAZMAT	27	6850 010634760 91522 CLEANING COMPOUND, SOLVENT	20 OZ	1.40	45	1.25	71-55-6 1,1,1-Trichloroethane	70	
							124-38-9 CARBON DIOXIDE (PROPELLANT)	5	
							127-18-4 Tetrachloroethylene	30	
							----		
								105	

ORR CENTER	BLDG NO	FSC	NIIN	CAGE	PRODUCT (ITEM) NAME	ISSUE	CONT	S.GRAV	QUANT.	LBS/UNIT	CAS #	CONSTITUENT	EH5 R
AZMAT	27	8010	001417838	64246	COATING COMPOUND, NON-SLIP, OL	1	QUART	0.00	0	0.00		***** No Constituents Found *****	0
AZMAT	27	8010	001429279	00297	PIGMENTED COMPONENT (SEE SUPP	55	GAL	1.00	0	458.70		67-63-0 Isopropanol	0
												71-23-8 N-PROPYL ALCOHOL	1
												71-36-3 n-Butyl alcohol	0
												78-93-3 2-Butanone (MEK)	0
												105-46-4 sec-Butyl acetate	0
												107-98-2 METHOXY-2-PROPANOL (VP 10.9 MM	25
												108-88-3 Toluene	0
												110-80-5 2-Ethoxyethanol	0
												1330-20-7 Xylene (total)	0
												1675-54-3 2,2-BIS(4-(2,3-EPOXYPROPYLOXY)	10
												7789-06-2 Strontium chromate	10
												8030-30-6 NAPHTA (PETROLEUM SPIRITS OR B	0
												13463-67-7 Titanium dioxide	1
												14807-96-6 TALC (ENCAPSULATED FORM, NOT H	1
												14808-60-7 SILICA, CRYSTALLINE - QUARTZ	1
												61790-53-2 SILICA, AMORPHOUS, DIATOMACEOU	1
												-----	50
AZMAT	27	8010	001817568	55208	REMOVER PAINT CLASS 1 - PHENOL	1	GAL	1.15	9	9.59		75-09-2 Methylene chloride	50
												108-95-2 Phenol	17 x x



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HAZMAT

27

8010 004825651 33461 POLYURETHANE COATING

2 QT

1.08

29

4.50

77-58-7 DIBUTYL TIN DILAURATE (VAPOR PR	0
78-93-3 2-Butanone (MEK)	15
100-41-4 Ethylbenzene	0
108-10-1 4-Methyl-2-Pentanone (MIBK)	10
108-65-6 PROPYLENE GLYCOL METHYL ETHER	0
108-88-3 Toluene	0
111-15-9 2-ETHOXYETHYL ACETATE (CELLOSO	25
123-86-4 n-Butyl acetate	0
141-78-6 Ethyl acetate	15
763-69-9 ETHYL 3-ETHOXYPROPIONATE (VAPO	5
822-06-0 1,6-DIISOCYANATOHXANE (HEXAME	1
1330-20-7 Xylene (total)	0
4035-89-6 ALIPHATIC ISOCYANATE BIURET OF	30
12656-85-8 LEAD CHROMATE MOLYBDATE (VP: 0	15

ORK CENTER	BLDG NO	FSC	NIIN	CAGE	PRODUCT (ITEM) NAME	ISSUE	CONT	S.GRAV	QUANT.	LBS/UNIT	CAS #	CONSTITUENT	EHs R
												26376-86-3 FLOW AGENT (VAPOR PRESSURE 0 M	0
												28182-81-2 ALIPHATIC ISOCYANATE	30
												64742-95-6 AROMATIC PETROLEUM DISTILLATE	0
												----	146
AZMAT	27		8010 009080362	0JPM3	COATING KIT, RAIN EROSION RESI 2 QUART	1.00	13	4.17			71-43-2 Benzene	0	
											78-93-3 2-Butanone (MEK)	4	
											100-41-4 Ethylbenzene	3	
											108-65-6 PROPYLENE GLYCOL METHYL ETHER	20	
											108-88-3 Toluene	2	
											111-15-9 2-ETHOXYETHYL ACETATE (CELLOSO	25	
											123-86-4 n-Butyl acetate	10	
											584-84-9 Toluene 2,4-diisocyanate	1	X X
											1330-20-7 Xylene (total)	15	
											1344-28-1 Aluminum oxide	56	
											7727-43-7 BARIUM SULFATE	12	
											999916-75-0 VOLATILE ORGANIC CONTENT: 4.2	1	
											----	149	
AZMAT	27		8010 009357080	61196	EPOXY POLYAMIDE PRIMER--COMP A 2 QT	1.00	14	4.17			78-83-1 Isobutyl alcohol	15	
											108-88-3 Toluene	8	
											1330-20-7 Xylene (total)	1	
											999900-31-8 2-EPOXYETHANOL	15	

## 999913-51-6 STRONTIUM CHROMATE

25

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64

HAZMAT

27

8010 012853035 33461 POLYURETHANE BASE

1 QT KT

1.47

24

3.06

77-58-7 DIBUTYL TIN DILAURATE (VAPOR PR	0
100-41-4 Ethylbenzene	0
107-87-9 METHYL PROPYL KETONE (2-PENTAN	5
108-10-1 4-Methyl-2-Pentanone (MIBK)	25
108-88-3 Toluene	5
108-94-1 Cyclohexanone	25
123-86-4 n-Butyl acetate	5
763-69-9 ETHYL 3-ETHOXYPROPIONATE (VAPO	10
822-06-0 1,6-DIISOCYANATOHEXANE (HEXAME	1
1330-20-7 Xylene (total)	0
28182-81-2 ALIPHATIC ISOCYANATE	45

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WORK CENTER	BLDG NO	FSC	NIIN	CAGE	PRODUCT (ITEM) NAME	ISSUE	CONT S.GRAV	QUANT.LBS/UNIT	CAS #	CONSTITUENT	EH5 R	
										64742-88-7 ALIPHATIC PETROLEUM DISTILLATE	0	
										64742-95-6 AROMATIC PETROLEUM DISTILLATE	1	
										999901-81-5 ANTI MAR AGENT	1	
										999901-92-2 ANTISETTLING AGENT	1	
										999904-45-3 DISPERSION AID	1	
										999917-08-6 WEIGHT PER GALLON IN POUNDS: 1	0	
										----		
										125		
IAZMAT	27	8010	012853038	33461	POLYURETHANE BASE	1	QUART	1.19	8	2.48	77-58-7 DIBUTYL TIN DILAURATE (VAPOR PR	0
										100-41-4 Ethylbenzene	0	
										107-87-9 METHYL PROPYL KETONE (2-PENTAN	5	
										108-10-1 4-Methyl-2-Pentanone (MIBK)	45	
										108-65-6 PROPYLENE GLYCOL METHYL ETHER	1	
										108-88-3 Toluene	4	
										108-94-1 Cyclohexanone	25	
										110-43-0 Heptan-2-one	5	
										123-54-6 2-4 PENTANEDIONE (VAPOR PRESSU	5	
										123-86-4 n-Butyl acetate	5	
										763-69-9 ETHYL 3-ETHOXYPROPIONATE (VAPO	10	
										1330-20-7 Xylene (total)	1	
										8007-18-9 YELLOW TITANIE PIGMENT (VAPOR	10	
										13463-67-7 Titanium dioxide	5	
										28182-81-2 ALIPHATIC ISOCYANATE	45	

166

HAZMAT	27	8010 012930789 33461 POLYURETHANE COATING, WHITE 17 1 QT	1.37	36	2.86	77-58-7 DIBUTYLTIN DILAURATE (VAPOR PR	0
						78-93-3 2-Butanone (MEK)	20
						108-10-1 4-Methyl-2-Pentanone (MIBK)	10
						108-65-6 PROPYLENE GLYCOL METHYL ETHER	0
						1330-20-7 Xylene (total)	0
						28182-81-2 ALIPHATIC ISOCYANATE	75
						----	105
HAZMAT	27	8010 013138700 5V430 EPOXY COATING KIT, WHITE 17925 2 QT	11.69	44	48.75	78-93-3 2-Butanone (MEK)	5
						108-88-3 Toluene	15
						1477-55-0 META XYLENE DIAMINE	0
						13463-67-7 Titanium dioxide	40

[illegible]

HAZMAT	27	8030 007646658 73165 FEL-PRO C-200	1 QT	1.45	18	3.02	1317-36-8 LEAD OXIDE (EXPOSURE LIMIT BASED 1330-20-7 Xylene (total))	17 6 ----- 23
HAZMAT	27	8030 008238039 OBYN5 CORROSION RESISTANT COATING, C	1 GAL	1.00	16	8.34	1333-82-0 CHROMIUM (VI) OXIDE 7732-18-5 Water 13746-66-2 POTASSIUM FERRICYANIDE 16893-85-9 SODIUM SILICO FLUORIDE	5 1 1 1 ----- 8
HAZMAT	27	8030 008812618 04011 SEALING COMPOUND	2.50Z CN	1.62	23	0.16	108-88-3 Toluene 1309-60-0 LEAD PEROXIDE (LEAD DIOXIDE),	2 70 ----- 72

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Corpus Christi  
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WORK CENTER	BLDG NO	FSC	NIIN	CAGE	PRODUCT (ITEM) NAME	ISSUE	CONT	S.GRAV	QUANT.	LBS/UNIT	CAS #	CONSTITUENT	EHS R
HAZMAT	27	8030	009381947		SPRAY CORROSION PREVENTIVE COMPOUND	16	OZ	1.00	190	1.00	76-13-1	Freon 113	45
											124-38-9	CARBON DIOXIDE (PROPELLANT)	5
											64741-73-7	SOLTROL 220	25
											999902-29-7	BARIUM COMPOUNDS (SARA 313)	20
												----	
													95
HAZMAT	27	8030	010411596		OFTTS CORROSION PREVENTIVE COMPOUND, 1 PT			1.07	82	1.12	67-63-0	Isopropanol	5
											71-36-3	n-Butyl alcohol	2
											75-71-8	Dichlorodifluoromethane	13
											76-13-1	Freon 113	25
											78-83-1	Isobutyl alcohol	7
											97-85-8	ISOBUTYL ISOBUTYRATE	5
											108-88-3	Toluene	3
											800-20-6	ALKYL AMMONIUM ORGANIC PHOSPHA	1
											8008-20-6	Kerosene	1
											25619-56-1	BARIUM SULFONATE	1
											64741-97-5	DISTILLATES, SOLVENT-REFINED L	2
											64742-94-5	HEAVY AROMATIC SOLVENT NAPHTHA	19
												----	
													84
HAZMAT	27	9150	001491593		07950 GREASE,BALL AND ROLLER BEARING	1.0	LBS	1.00	24	1.00	62-54-4	ACETIC ACID, CALCIUM SALT	0
											7632-00-0	Sodium nitrite	0
											7775-11-3	Sodium chromate	0

68037-01-4 POLYALPHAOLEFINS	70
71011-25-1 ORGANOPHYLIC CLAY	5

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75

HAZMAT	27	9150 010917500 30119 LUBRICANT, WIRE PULLING	1 QT	0.80	19	1.67
--------	----	----------------------------------------------	------	------	----	------

57-11-4 Stearic acid	1
151-21-3 SODIUM LAURYL SULFATE	3
1310-73-2 Sodium hydroxide	1
4080-31-3 ANTIMICROBIAL AGENT	1
7632-00-0 Sodium nitrite	2
7732-18-5 Water	86
7757-82-6 Sodium sulfate	1
9004-32-4 CARBOXYMETHYLCELLULOSE	2
12001-26-2 MICA - SILICATES (< 1% CRYSTAL	6
999912-82-2 SOAP FLAKES	3

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106

ORK CENTER	BLDG NO	FSC	NTIN	CAGE	PRODUCT (ITEM) NAME	ISSUE	CONT S.	GRAV	QUANT.	LBS/UNIT	CAS #	CONSTITUENT	EHS R
AZMAT	27			CCHS LLP002065 09225	EPOXY PRIMER KIT, LIGHT GRAY, QT	1.55	37	3.23			71-36-3	n-Butyl alcohol	1
											108-10-1	4-Methyl-2-Pentanone (MIBK)	7
											110-12-3	ISOAMYL METHYL KETONE	15
											7440-66-6	Zinc	2
											13463-67-7	Titanium dioxide	30
											14808-60-7	SILICA, CRYSTALLINE - QUARTZ	5
													----
													60
AZMAT	27			CCHS LLP002066 00000	EPOXY PRIMER COATING KIT, LIGH 1 QT	0.00	37	0.00			95-63-6	Benzene, 1,2,4-trimethyl	5
											107-98-2	METHOXY-2-PROPANOL (VP 10.9 MM	45
											108-10-1	4-Methyl-2-Pentanone (MIBK)	2
											64742-95-6	AROMATIC PETROLEUM DISTILLATE	9
													----
													61
AZMAT	27			CCHS LLP002067 00000	PRIMER COATING,EPOXY POLYAMIDE PT	0.00	13	0.00			67-63-0	Isopropanol	60
											71-23-8	N-PROPYL ALCOHOL	10
											108-88-3	Toluene	20
													----
													90
AZMAT	27			CCHS LLP002068 70228	WLAKWAY COMPOUND NON-SLIP 1 GAL	1.35	6	11.26			14808-60-7	SILICA, CRYSTALLINE - QUARTZ	50
											64742-89-8	VM & P NAPHTHA	20

70

15

20

35

30

100

15

25

15

55

HAZMAT

27

CCHS LLP002069 5W216 THINNER DOPE & LACQUER

5 GAL

0.83

21

34.61

78-93-3 2-Butanone (MEK)

108-88-3 Toluene

110-19-0 iso-Butyl acetate

124-68-5 N-BUTYL ALCOHOL

----

15

25

15

55

HAZMAT

27

CCHS LLP002070 33461 POLYURETHANE COATING BLACK PAR QT

1.04

13

2.17

78-93-3 2-Butanone (MEK)

111-15-9 2-ETHOXYETHYL ACETATE (CELLOSO

141-78-6 Ethyl acetate

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Navy EPCRA System  
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EPCRA Inventory by Work Center

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WORK CENTER	BLDG NO	FSC	NIIN	CAGE	PRODUCT (ITEM) NAME	ISSUE	CONT	S.GRAV	QUANT.	LBS/UNIT	CAS #	CONSTITUENT	EHS R
HAZMAT	27	CCHS	LLP002071	12625	FUEL, ENGINE PRIMER - AEROSOL	CN		0.71	180	0.00	60-29-7 Diethyl ether 124-38-9 CARBON DIOXIDE (PROPELLANT) 142-82-5 N-HEPTANE		60 6 33 ---- 99
HAZMAT	27	CCHS	LLP002072	73165	ANTISEIZE	1.5 LB		1.45	18	1.50	1317-36-8 LEAD OXIDE (EXPOSURE LIMIT BASED 1330-20-7 Xylene (total)		17 5 ---- 22
HAZMAT	27	CCHS	LLP002282	09052	BATTERY STORAGE	55 LBS		1.00	2	55.00	1310-58-3 Potassium hydroxide 7440-02-0 Nickel 7440-43-9 Cadmium		7 27 15 ---- 49
HDSC	353	6830	001061659	18873	MONOCHLORODIFLUOROMETHANE, TECH	50 LBS		0.96	18	50.00	75-45-6 CHLORODIFLUOROMETHANE		100 ---- 100
HDSC	353	6850	001412946	01977	COATING COMPOUND, OXIDE BLACK	55 GAL		1.19	9	545.85	***** No Constituents Found *****		---- 0

<b>Immediate Spill Response Emergency Action Plan</b>			
<b>Building 53: DRMO - Hazardous Waste Storage Facility</b>			
<b>WARNING:</b> Designated personnel at this facility have been specifically tasked, trained, and equipped to respond to oil and hazardous substance spills. Unauthorized individuals shall never undertake the response to or investigation of any actual or suspected oil or hazardous substance spills			
<b>I. IMMEDIATELY REPORT</b> spills by the most expeditious means (e.g., voice, telephone) to your supervisor, or contact the <b>FACILITY EMERGENCY COORDINATOR</b> as listed below:			
<b>Facility Emergency Coordinator</b>	<b>Shop</b>	<b>Title</b>	<b>Phone Ext.</b>
Verlen Teague	DRMO	Hazardous Waste Coordinator	3359
IF CONTACT CANNOT BE MADE WITH THE FACILITY EMERGENCY COORDINATOR, REPORT SPILLS IMMEDIATELY to:  <b>FIRE DEPARTMENT EXT. 3333</b>  Number of persons working at this site: 04			
<b>II. FIRE SAFETY PLAN</b>			
<b>A. Equipment</b>			
Building 53 has no fire alarms, smoke or heat detectors, or fire suppression equipment. Fire extinguishers are at each building exit.			
<b>B. Building Construction/Activity Description</b>			
Building 53 is used for 90-day hazardous waste storage. Building 53 is approximately 100 feet by 150 feet with a concrete foundation and metal walls and roof deck and is divided into 10 individual storage bays for wastes based on type and compatibilities. Building 53 not equipped with secondary containment equipment. Waste is typically staged in this area for characterization and transportation and final disposal, usually by a licensed waste hauler. The facility is responsible for the disposition of hazardous waste/materials of DoD generators in an approved manner.			

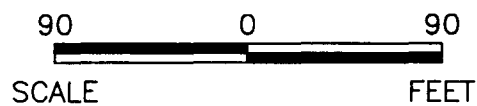
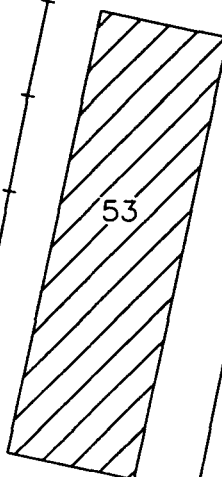
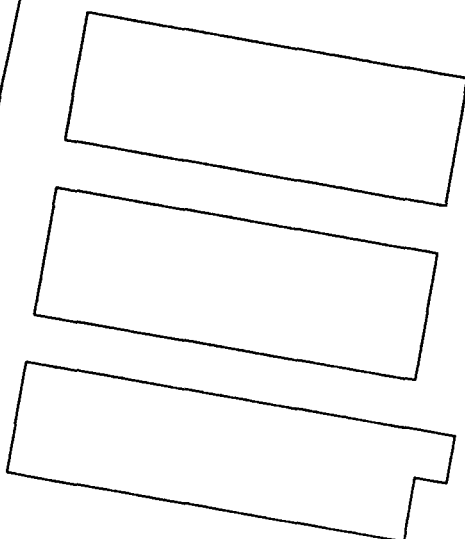
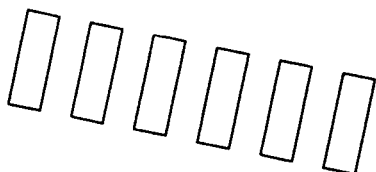
<b>Immediate Spill Response Emergency Action Plan</b>	
<b>Building 53: DRMO - Hazardous Waste Storage Facility</b>	
<b>III.</b>	<b>SITE HAZARDOUS SUBSTANCE INFORMATION</b>
<b>A.</b>	<b>Inventory</b>
Typical categories of materials used and stored in each storage bay of the facility are listed in Table ANNEX 1 - 2.0, Typical Site Inventory: Building 53.	
<b>B.</b>	<b>Probable Spill Route</b>
<p>The following spill scenarios were identified as most likely at building 53:</p> <p><u>Spill of Hazardous Substance inside the Building:</u></p> <p>The specific materials stored in each of the storage bays are clearly identified by appropriate labeling. The maximum spill potential for this site is approximately 55 gallons. Because no secondary containment exists at Building 53, it is likely a spill of liquid would migrate to the building perimeter and off the concrete slab onto the surrounding soil.</p> <p><u>Spill of Hazardous Substance in Drum-Loading Area:</u></p> <p>The maximum spill potential within the drum loading and handling area is approximately 55 gallons. Any liquid spilled in this area would likely be contained to the gravel and soils surrounding the loading area.</p>	
<b>C.</b>	<b>Spill Response Equipment and Materials</b>
A 55-gallon spill kit is in Building 53.	

Last updated: November 1994

<b>List ANNEX 1 - 2.0</b> <b>Typical Site Inventory: Building 53</b>		
<b>Storage Bay No.</b>	<b>Materials</b>	<b>Quantity On Hand</b>
1	Oils and Greases	10
2	Mercury-Related General Waste	3
3	Flammables-Solvents, Cleaners, Alcohols	5
4	Acids	5
5	Misc.-Cleaners, Batteries, Photocopy Materials	5
6	Paints and Thinners	5
7	Waste Flammables (Regulated)	10
8	Corrosive Bases and Batteries	5
9	Oxidizers	5
10	Asbestos	1

Last updated: November 1994

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LEGEND



- FIRE HYDRANT



- RAILROAD



NAS CORPUS CHRISTI  
OHS CONTINGENCY PLAN

BUILDING 53  
DRMO  
VICINITY PLAN

DWG DATE: 01/14/97 DWG NAME: 91CP03

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<b>Immediate Spill Response Emergency Action Plan</b>			
<b>Corpus Christi Army Depot (CCAD), Hazardous Material Issue Points (Facility Wide), and Hazardous Waste Storage Facility (Building 257)</b>			
<b>WARNING:</b> Designated personnel at this facility have been specifically tasked, trained, and equipped to respond to oil and hazardous substance spills. Unauthorized individuals shall never undertake the response or investigation to any actual or suspected oil or hazardous substance spills			
<b>I. IMMEDIATELY REPORT</b> spills by the most expeditious means (e.g., voice, telephone) to your supervisor, or contact the <b>FACILITY EMERGENCY COORDINATOR</b> as listed below:			
<b>Facility Emergency Coordinator</b>	<b>Shop</b>	<b>Title</b>	<b>Phone Ext.</b>
Mr. Charles Gawenis	CCAD	Environmental Engineer	4170
Mr. Juan Montes	CCAD	Environmental Technician	2732
Mr. Rodolfo Ramos	257	Hazardous Waste Coordinator	2469
<b>IF CONTACT CANNOT BE MADE WITH THE FACILITY EMERGENCY COORDINATOR, REPORT SPILLS IMMEDIATELY to:</b>  <b>FIRE DEPARTMENT EXT. 3313</b>  Number of Persons Working at this Site: 3,400			
<b>II. FIRE SAFETY PLAN</b>			
<b>A. Equipment</b>			
CCAD is equipped with an automatically or manually activated sprinkler system and heat and smoke detectors. Fire extinguishers and alarms are throughout the facility with fire extinguisher approximately 50 feet apart in industrial areas and 75 feet apart in office areas and corridors, and at each building exit. Emergency response is initiated by fire alarm or telephone.			

## Immediate Spill Response Emergency Action Plan

### Corpus Christi Army Depot (CCAD), Hazardous Material Issue Points (Facility Wide), and Hazardous Waste Storage Facility (Building 257)

#### B. Building Construction/Activity Description

CCAD is an industrial complex which operates as a fully self-sufficient tenant of NAS Corpus Christi. The mission of CCAD is to overhaul, repair, modify, retrofit, and modernize Army aircraft systems. CCAD has implemented an aggressive system for the control and use of hazardous materials, and to minimize hazardous waste generated. Other than bulk quantities of materials used in the plating shop all hazardous materials are issued in daily-use quantities from one of 10 HazMat Issue Points throughout the facility. Hazardous wastes are stored at Building 257. The HazMat Issue Points are staffed full time and materials are signed out by each user with the unused quantity returned each day. CCAD maintains a fully equipped hazardous material spill response team that will respond in parallel with the NAS fire department. **CCAD has developed and implemented a Spill Prevention Control and Countermeasure Plan (SPCC) for all operations within CCAD.** The following generally describe the hazardous material and waste storage locations:

##### **HazMat Issue Points**

Each issue point (see CCAD Site Plan for locations) is secured and made up of flammable, corrosive, and satellite accumulation storage lockers. Each issue point maintains an inventory of material for use in that shop area. Materials are inventoried in small-quantity containers or are issued from bulk containers into approved single-day containers. Each area is equipped with a spill kit.

##### **Plating Shop**

The plating shop area is used for the chemical treatment and plating of CCAD engine parts. There are 152 tanks in use within the plating shop. Eighty-six tanks contain process solutions and 66 are used for rinsing. The shop area is equipped with floor drains and a chrome ventilation tunnel through which any spill will be drained to the industrial waste pretreatment plant.

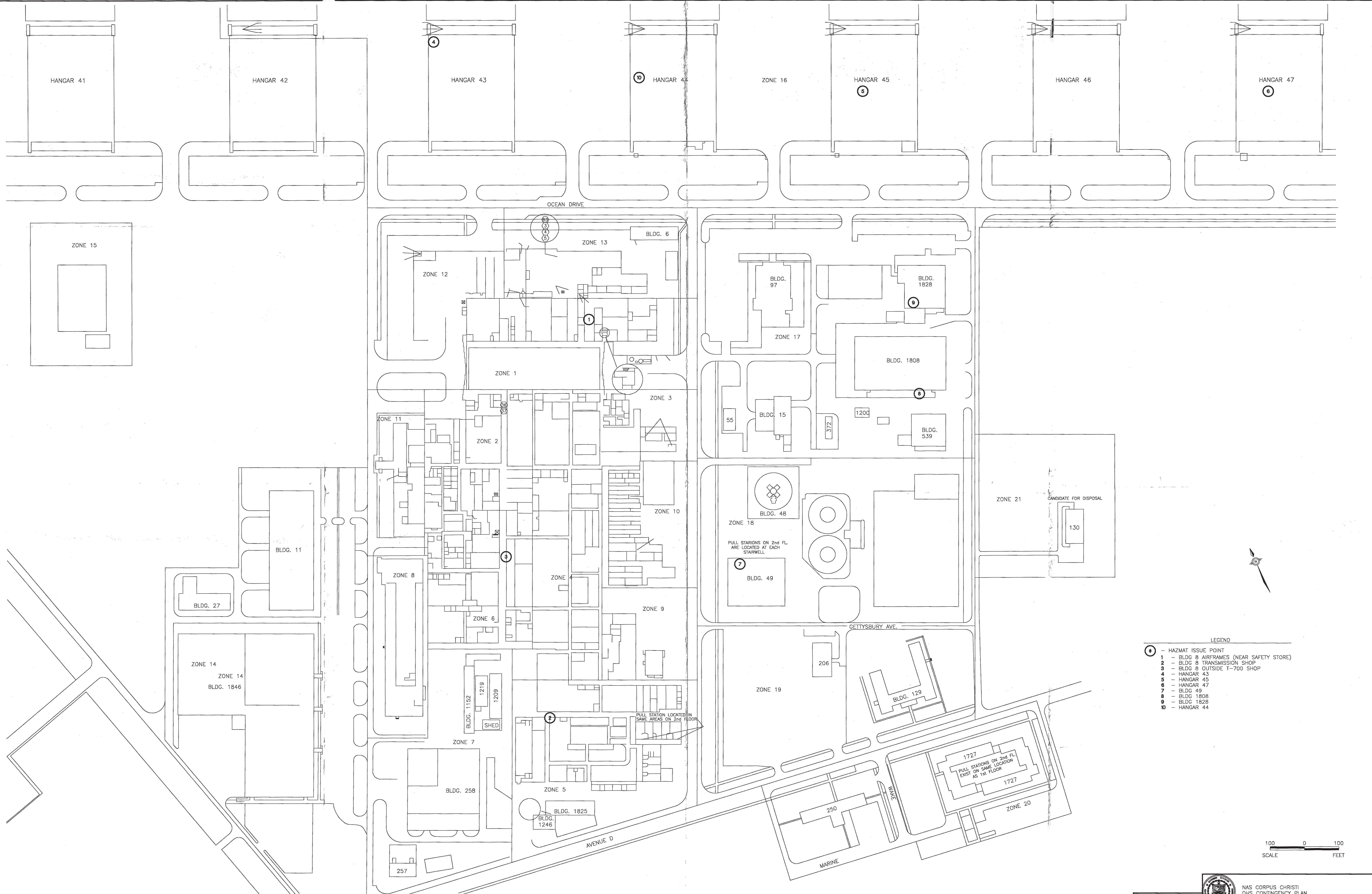
##### **Building 257 - Temporary Hazardous Waste Storage Facility**

This building to handle and stores hazardous waste generated by CCAD operations and is at D and Crecy Street. All wastes are stored in 55-gallon drums, 500-gallon tote tanks, and bowsters. Physical separation of wastes by storage in segregated areas inside and outside Building 257 prevents accidental mixture of incompatible wastes. The building is equipped with appropriately bermed and sloped areas of appropriate volume to prevent mixing of incompatible wastes.

<b>Immediate Spill Response Emergency Action Plan</b>
<b>Corpus Christi Army Depot (CCAD), Hazardous Material Issue Points (Facility Wide), and Hazardous Waste Storage Facility (Building 257)</b>
<b>III. SITE HAZARDOUS SUBSTANCE INFORMATION</b>
<b>A. Inventory</b>
<p>Typical categories of materials that are inventoried at CCAD include paints, coatings, flammable solvents, chlorinated solvents, strong acids, oxidizers, lubricants, and cleaning compounds. Hazardous and flammable materials approved for use on the base may be stored at this facility and therefore that approved users list is attached: Table ANNEX 1 - 3.0A, Typical Site Inventory: CCAD HazMat Issue Points, Table ANNEX 1 - 3.0B Plating Shop Tank Inventory, and Table ANNEX 1-3.0C Building 257</p>
<b>B. Probable Spill Route</b>
<p>The following spill scenarios were identified as most likely at CCAD:</p> <p><b>HazMat Issue Points</b>  <u>Spill of Hazardous Substance:</u>  The specific materials staged in the facility are clearly identified by appropriate labeling. The maximum spill potential for this site is approximately 55 gallons. A spill of hazardous substance in a storage area would likely be contained to the building area and controlled via absorbent material at the issue point. Issue point attendants are properly trained to recognize and control a hazardous substance spill.</p> <p><b>Plating Shop</b>  <u>Spill of Hazardous Substance:</u>  The specific materials staged in the facility are clearly identified by appropriate labeling. The maximum spill potential for this site is approximately 600 gallons. There are 152 tanks in use within the plating shop; 86 tanks contain process solutions and 66 are used for rinsing. The shop area is equipped with floor drains and a chrome ventilation tunnel through which any spill will be drained to the industrial waste pretreatment plant operated by NAS Corpus Christi Public Works Department.</p> <p><b>Building 257- Temporary Hazardous Waste Storage Facility</b>  <u>Spill of Hazardous Substance Inside of Building:</u>  Up to 240 55-gallon drums and eight 500-gallon tanks may be stored at this facility at any one time. Any spill within the building would likely be contained to the building area via sloped floors and existing containment sumps of appropriate volume.</p> <p><u>Lift Truck Accident (Loading and Unloading Wastes)</u>  Due to the large volume and mixed nature of substances handled by this facility, the most likely spill scenario would involve an incident in the hazardous waste receiving or loading area. The receiving and staging area is not large enough to handle a tractor-trailer and therefore loading operations occur in the street. An incident in the street would likely drain downgradient to the north drainage ditch.</p>

<b>Immediate Spill Response Emergency Action Plan</b>	
<b>Corpus Christi Army Depot (CCAD), Hazardous Material Issue Points (Facility Wide), and Hazardous Waste Storage Facility (Building 257)</b>	
<b>C.</b>	<b>Spill Response Equipment and Materials</b>
Each shop area is equipped with a spill kit. CCAD also maintains a fully equipped HAZMAT Spill Response Team and Vehicle which are associated with Building 257 operations.	


Last updated: ~~November 1994~~

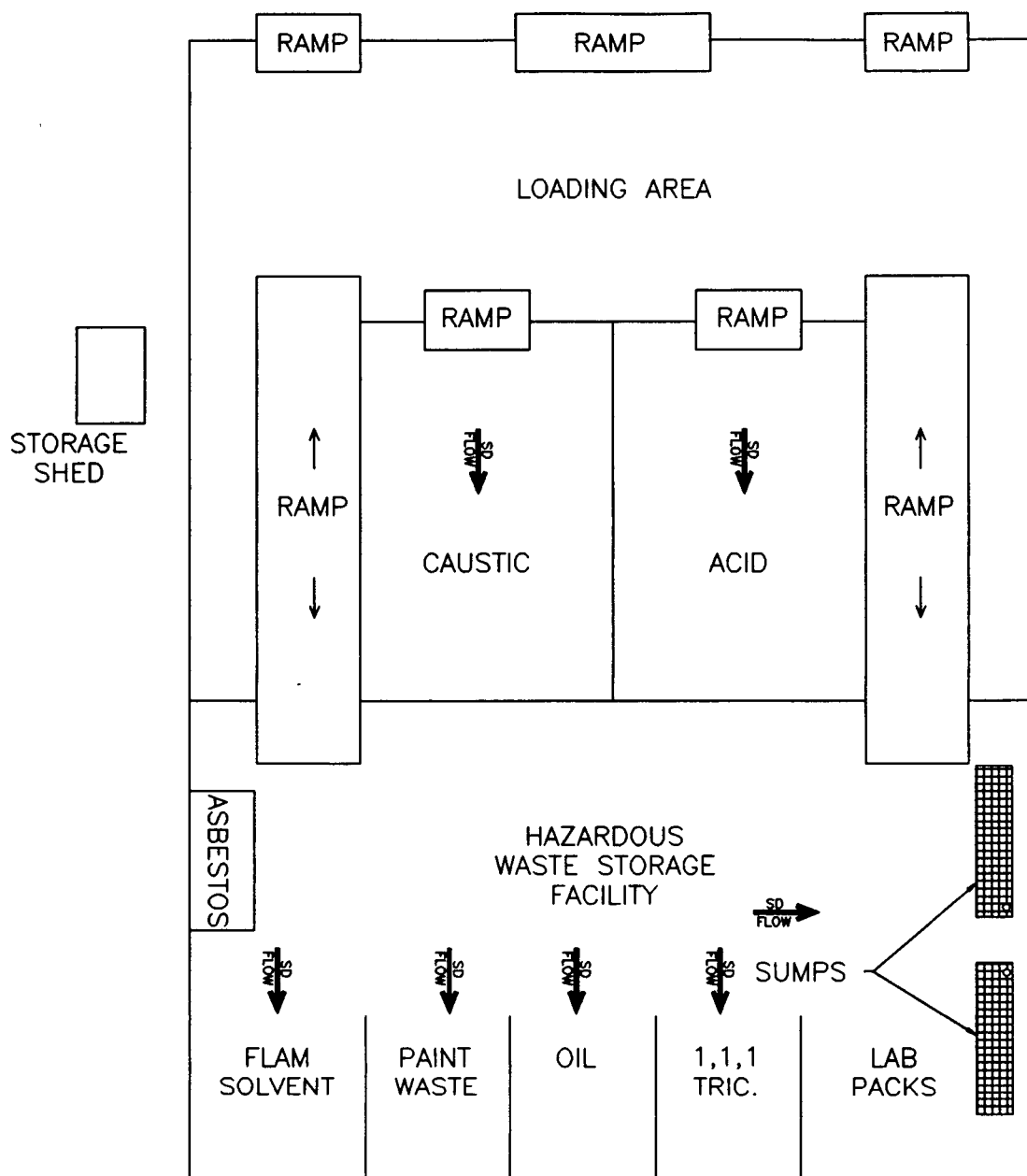


- LEGEND
- - HAZMAT ISSUE POINT
  - 1 - BLDG 8 AIRFRAMES (NEAR SAFETY STORE)
  - 2 - BLDG 8 TRANSMISSION SHOP
  - 3 - BLDG 8 OUTSIDE T-700 SHOP
  - 4 - HANGAR 43
  - 5 - HANGAR 45
  - 6 - HANGAR 47
  - 7 - BLDG 49
  - 8 - BLDG 1808
  - 9 - BLDG 1828
  - 10 - HANGAR 44

SOURCE: U.S. NAVY

REVISION		
Rev Number: 001	Rev Date: 01/08/95	Rev By: C. TRIPLETT
Rev Number: 000	Rev Date: 00/00/00	Rev By: NAME
Rev Number: 000	Rev Date: 00/00/00	Rev By: NAME
Rev Number: 000	Rev Date: 00/00/00	Rev By: NAME
Rev Number: 000	Rev Date: 00/00/00	Rev By: NAME

		NAS CORPUS CHRISTI OHS CONTINGENCY PLAN	
HAZMAT ISSUE POINTS CCAD COMPLEX			
Dr by: NAVY		Tr by: CHRIS TRIPLETT	
Ok by: J. BOROWSKI	App by: R. BARLOW	Sheet	1
Date: 01/08/95	DWG Name: 050CCAD1	Of	1



15 0 15  
SCALE FEET

SD  
FLOW



NAS CORPUS CHRISTI  
OHS CONTINGENCY PLAN

BUILDING 257  
CCAD H.W. STORAGE FACILITY  
SITE PLAN

DWG DATE: 01/14/97 | DWG NAME: 91CP04

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<p align="center"><b>List ANNEX 1 - 3.0A</b>  <b>Typical Site Inventory: CCAD HAZMAT Issue Points</b></p>
---------------------------------------------------------------------------------------------------------------

BLDG.	INVENTORY ITEM	AMOUNT STORED	
HDSC 1	Corrosion Prevention Compound	15	1-gal. cans
	Isopropyl Alcohol	2	5 gal. cans
	Aircraft Grease	2	5 gal. cans
	Methyl Ethyl Ketone	1	5-gal. can
	Alcohol Denatured	2	5-gal. cans
	Acetone	3	5-gal. cans
	Toluene	1	5-gal. can
	Naphtha	1	1-gal. can
	Hydraulic Fluid	9	1-gal. cans
	Ammonium Hydroxide	16	1-gal. btls.
HDSC 2	Isopropyl Alcohol	1	5-gal. can
	Aircraft Grease	1	5-gal. can
	Acetone	4	5-gal. cans
	Dry Cleaning Solvent	1	5-gal. cans
	Presto Black	10	1 gal. cans
HDSC 3	Lube Oil	3	5-gal. cans
	Hydraulic Fluid	1	5-gal. can
	Cutting Fluid	1	5-gal. can
	Acetone	1	5-gal. can
	Isopropyl Alcohol	1	5-gal. can
	Thinner Dope and Lacquer	1	5-gal. can
	Cellulose Nitrate	1	5-gal. can
	Toluene	1	5-gal. can
	Cleaning Solvent (CRC-2-26)	1	5-gal. can
	Paint - Enamel and Primers	40	1-gal. cans
	Chrome Pickle	1	5-gal. can
	Presto Black	2	5-gal. cans
	Acetic Acid	2	1-gal. cans
	Leak Detection Compound	2	1-gal. cans
	X Caliber	7	1-gal. cans
HDSC 4	Isopropyl Alcohol	4	5-gal. cans
	Corrosion-Resistant Coat	1	5-gal. can
	Hydro Fluid	20	1-qt. can
	Naphtha	2	5-gal. cans
	Isopropyl Alcohol	2	5-gal. cans
	Methyl Ethyl Ketone	2	5-gal. cans
	Dry Cleaning Solvent	2	5-gal. cans

BLDG.	INVENTORY ITEM	AMOUNT STORED	
HDSC 6	Enamel	2	1-gal. cans
	Thinner	1	1-gal. can
	Royal Lube Oil	100	1-qt. cans
	Aircraft Grease	5	2-qt. cans
	Naphtha	2	5-gal. cans
	Diethylenetriamine	3	1-gal. cans
	Isopropyl Alcohol	2	5-gal. cans
HDSC 7	Isopropyl Alcohol	3	5-gal. cans
	Methyl Ethyl Ketone	4	5-gal. cans
	Naphtha	7	1-gal. cans
	Cadmium Plating Solution	2	1-gal. cans
	Silver Jell 107 (Acid)		

**List ANNEX 1 - 3.0B**  
**Plating Shop Tank Inventory**

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623T/Disk #1 - 2/7/91

**Table II-1. Function and Capacity of Process Tanks Present at CCAD Plating Shop**

<b>Tank Number</b>	<b>Tank Function</b>	<b>Tank Capacity (Gal.)</b>
A-1	Chrome Plate	448
A-3	Chrome Plate	448
A-4A	Chrome Plate	168
A-4B	Sulfuric Acid Activator	168
A-6	Chrome Plate	524
A-7	Chrome Plate (Holding)	524
A-9	Chrome Plate	524
A-10	Chrome Plate	524
A-12	Chrome Plate	524
B-3	Sulfuric Acid Activator	314
B-5	Chrome Plate Strip	336
B-6A	Lead Anode Strip	392
B-11	Alkaline Rust Remover	202
C-3	Chromic Conversion Coat (alum)	448
C-4	Chromic Anodize Seal	448
C-6	Chromic Acid Anodize	235
C-7	Chromic Acid Anodize	951
D-1	Aluminum Alkaline Cleaner	448
D-3	Anodize Strip	471
D-5	Alum Deoxidizer	448
D-7	Sulfuric Anodize (MIIC)	269
E-1	Alkaline Rust Remover	374
E-2	Alkaline Scale Remover	374

**Table II-1. Function and Capacity of Process Tanks Present at CCAD  
Plating Shop (Continued)**

<b>Tank Number</b>	<b>Tank Function</b>	<b>Tank Capacity (Gal.)</b>
B-4	Remove Alum from Steel	235
B-6	Sealer	235
B-8	Phospholine Corrosion Remover	269
B-10	Stainless Passivation	224
F-4	Cadmium Plate	205
F-7	Cadmium Plate	538
F-8	Cadmium Plate (Nonbake Parts)	538
F-10	Cadmium Strip	235
F-12	Cadmium Holding Tank (Sodium Cyanide)	235
F-13	Cadmium Holding Tank (Sodium Cyanide)	235
F-15	Cadmium Plate	538
F-16	Watts Nickel Plate	314
G-1	Trico-Vapor Degreaser	—
G-2	Alkaline Rust Remover	785
G-4	Alk. Elec. Plat. Cleaner	742
G-6	Acid Activator	564
G-8	Cadmium Plate	471
G-10	Cadmium Strip	471
G-13	Iridite (Cadmium)	327
G-15	Cadmium Plate	327
G-17	Manganese Phosphate	163
G-19	Steel Activator	140
II-1	Copper Strip	160
II-5	Copper Strike	168
II-6	Copper Plate	196

**Table II-1. Function and Capacity of Process Tanks Present at CCAID  
Plating Shop (Continued)**

<b>Tank Number</b>	<b>Tank Function</b>	<b>Tank Capacity (Gal.)</b>
II-8	Silver Strip (Steel)	135
II-10	Nickel Strike	135
II-11	Silver Strike	135
II-13	Silver Plate	168
II-14	Silver Strip - Brass	135
II-21	Nickel Strip	140
II-22	Nickel Strike	168
II-23	Nickel Sulfamate Plate	220
I-1	Alkaline Cleaner - Magnesium	404
I-3	Chrome Strip	269
I-5	Magnesium Activator	202
I-7	Corrosion Preventive (DOW 7)	408
I-8	Chrome Strip	283
I-11	Corrosion Preventive (DOW 7)	334
J-1	Steel Pin Strip for Titanium	140
J-3	Titanium Anodize	116
J-5	Black Oxide	116
J-6	NiNi Etch - Process #1	140
J-8	NiNi Etch - Process #2	140
K-3	Vapor Degreaser	—
K-9	Vapor Degreaser	—
L-3	Hydrochloric 40%	140
L-5	Tin Plate	168
L-7	Silver Solder Leach Strip	140
M-2	Electroless Nickel Strip	45
M-4	Electroplating Cleaner	56

6231/Disk #1 - 2/7/91

**Table II-1 Function and Capacity of Process Tanks Present at CCAID  
Plating Shop (Continued)**

<b>Tank Number</b>	<b>Tank Function</b>	<b>Tank Capacity (Gal.)</b>
<b>M-6</b>	<b>Nickel Strike</b>	<b>52</b>
<b>M-8</b>	<b>Acid Activator - Steel</b>	<b>52</b>
<b>M-10A</b>	<b>Electroless Nickel Plate</b>	<b>94</b>
<b>M-10B</b>	<b>Electroless Nickel Plate</b>	<b>94</b>

<b>List ANNEX 1 - 3.0C</b> <b>Typical Site Inventory: Building 257</b>		
<b>Storage Bay No.</b>	<b>Materials</b>	<b>Quantity On-Hand</b>
9	Absorbents	32
8	Flammable Solvents	32
7	Paint Waste	32
6	Oils and Lubricants	32
5	Chlorinated Solvents	32
4	Lab Packs	32
3	Off-Specification Organic Solvents	32
2	Corrosive Bases & Batteries	32
1	Acids and Oxidizers	32

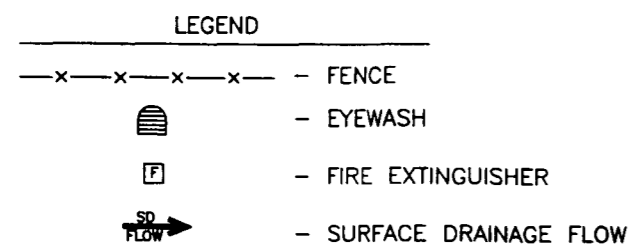
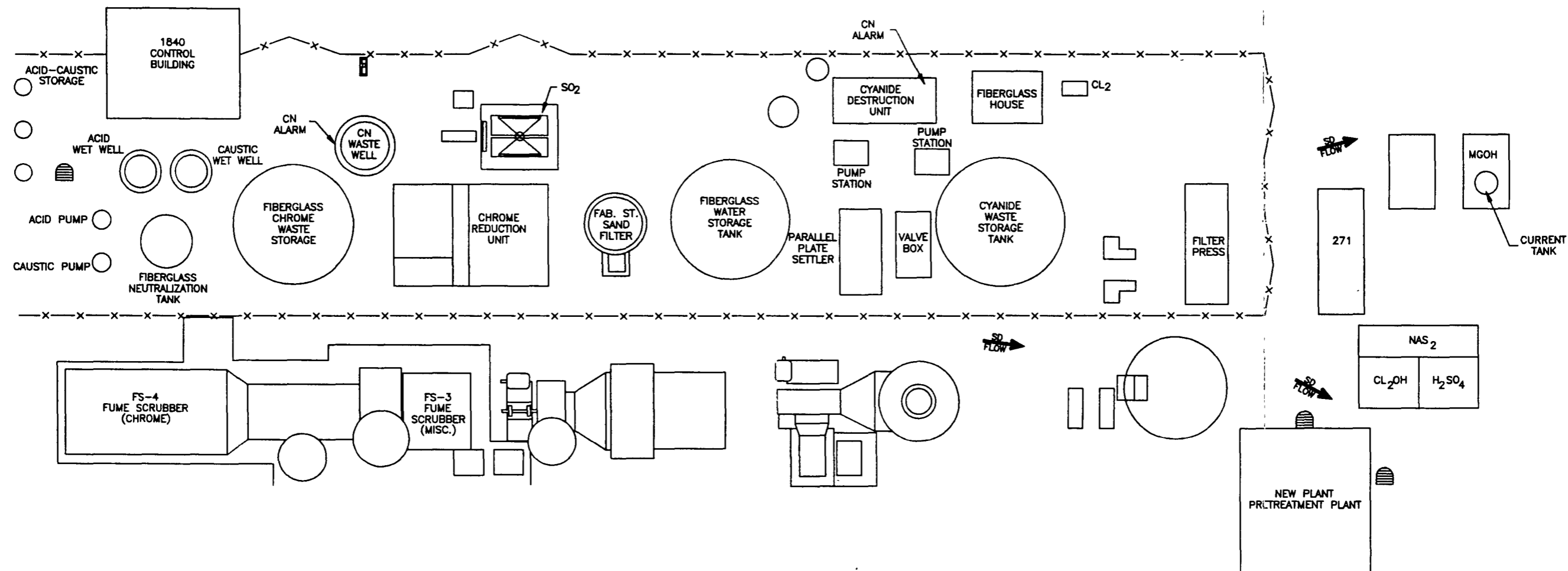
Last updated: ~~November~~ 1994

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<b>Immediate Spill Response Emergency Action Plan</b>			
<b>Industrial Wastewater Pretreatment Facility</b>			
<b>WARNING:</b> Designated personnel at this facility have been specifically tasked, trained, and equipped to respond to oil and hazardous substance spills. Unauthorized individuals shall never undertake the response or investigation to any actual or suspected oil or hazardous substance spills			
<b>I. IMMEDIATELY REPORT</b> spills by the most expeditious means (e.g., voice, telephone) to your supervisor, or contact the <b>FACILITY EMERGENCY COORDINATOR</b> as listed below:			
<b>Facility Emergency Coordinator</b>	<b>Shop</b>	<b>Title</b>	<b>Phone Ext.</b>
Charlie Potts Victor Mendez	52 52	Supervisor Work Leader	2567 3297
IF CONTACT CANNOT BE MADE WITH THE FACILITY EMERGENCY COORDINATOR, REPORT SPILLS IMMEDIATELY to:  <b>FIRE DEPARTMENT EXT. 3333</b>  Number of Persons Working at this site: 5			
<b>II. FIRE SAFETY PLAN</b>			
<b>A. Equipment</b>			
AB dry chemical, CO <sub>2</sub> , and Halon fire extinguishers are throughout the facility. This facility is an open air facility design for treatment of wastewater generated by the CCAD plating shop. All chemical storage areas are equipped with leak detectors and associated alarm mechanisms. The systems have audible and visual alarms. Emergency response is initiated by FM radio or telephone from the office area. This facility has no automatically or manually activated fire suppression system nor heat/smoke detectors.			
<b>B. Building Construction/Activity Description</b>			
The facility is an outddor plant off Forth Street in the CCAD complex. The facility is operated by Public Works personnel. The facility maintains tank storage of treatment chemicals and in the process of building a plant. The facility control panels and office area are just west of the treatment plant area in Building 271. The facility (Building 271) is manned full time.			

<b>Immediate Spill Response Emergency Action Plan</b>	
<b>Industrial Wastewater Pretreatment Facility</b>	
<b>III. SITE HAZARDOUS SUBSTANCE INFORMATION</b>	
<b>A.</b>	<b>Inventory</b>
<p>This facility uses chlorine and sulfur dioxide gas to treat industrial and domestic wastewater. In addition bulk quantities of acids and caustics are maintained onsite for wastewater treatment. Table ANNEX 4.0 - 1, CCAD INDUSTRIAL WASTEWATER PRETREATMENT FACILITY presents the maximum inventory of chemical.</p>	
<b>B.</b>	<b>Probable Spill Route</b>
<p>The following spill scenarios were identified as most likely at Buildings 1833 1794:</p> <p><u>Release of Chlorine or Sulfur Dioxide Gas:</u></p> <p>The maximum release potential of chlorine or sulfur dioxide gas for this site would be 1 ton of gas, which would migrate to downwind locations.</p> <p><u>Release of Acid or Caustic from Storage Tanks:</u></p> <p>All tanks associated with this site are fully contained with secondary containment walls of appropriate size and quality. At the time of this plan, tank containment systems were being constructed.</p>	
<b>C.</b>	<b>Spill Response Equipment and Materials</b>
<p>Two self-contained positive-pressure breathing apparatus and a Chlorine "A" kit are available onsite.</p>	

Last updated: November 1994



10 0 10  
SCALE FEET



NAS CORPUS CHRISTI  
OHS CONTINGENCY PLAN

CCAD  
WASTE WATER  
PRETREATMENT PLANT  
SITE PLAN

DWG DATE: 01/22/97 DWG NAME: 91CP23

00050E052

<b>Table ANNEX 1.0</b> <b>CCAD Industrial Wastewater Pretreatment Facility</b>	
<b>Material</b>	<b>Quantity On-Hand</b>
Chlorine Gas	2 150-pound Cylinders
Sulfur Dioxide	2 1-ton Cylinders
H <sub>2</sub> SO <sub>4</sub>	1,500-Gallon Tank
NaCl <sub>2</sub>	5,000-Gallon Tank
Mg OH	5,000-Gallon Tank
Sodium Meta-Bisulfite	5,000-Gallon Tank
Chrome Waste	600 Gallons
Cyanide Waste	600 Gallons

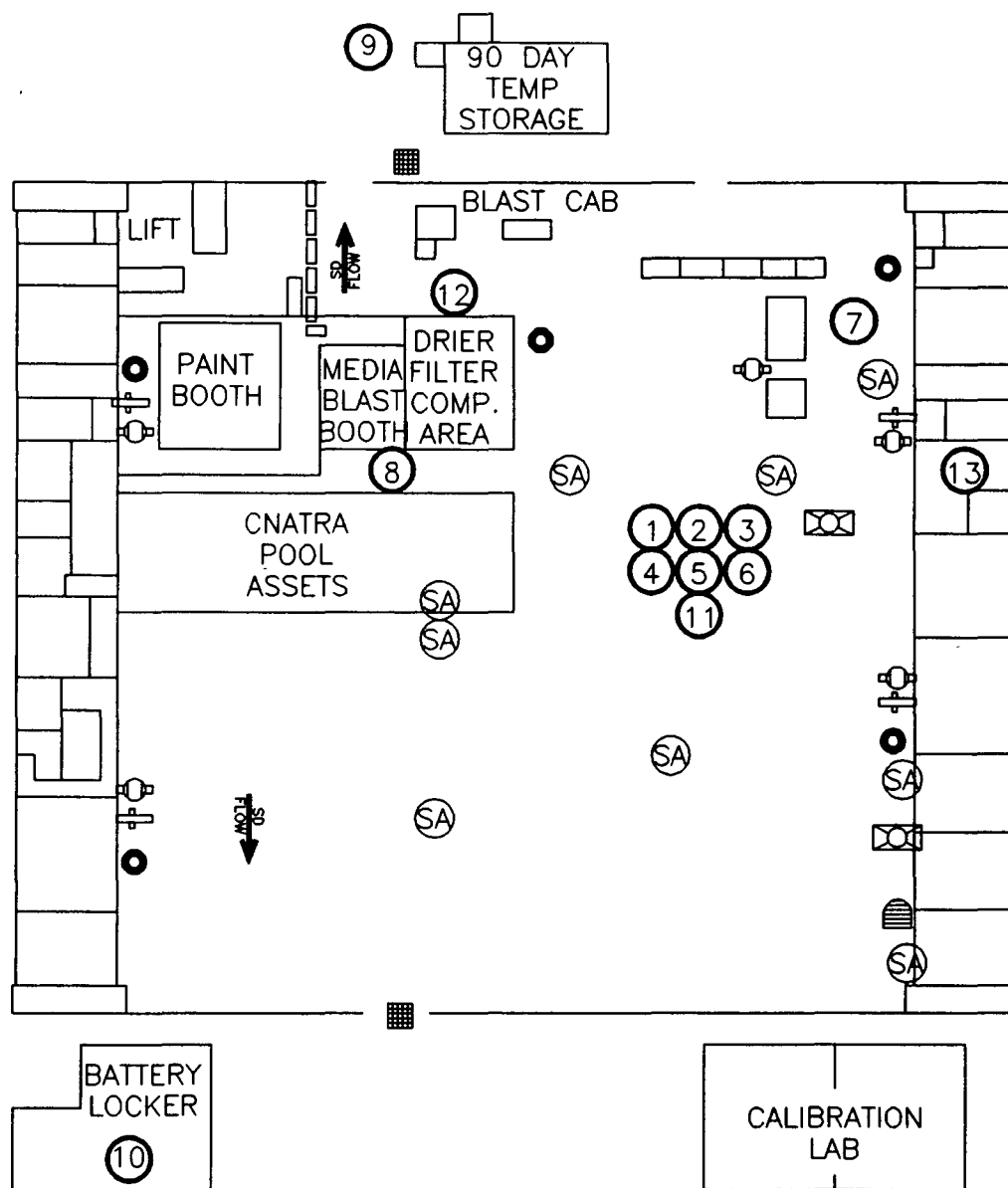
Last updated: ~~November 1994~~

<b>Immediate Spill Response Emergency Action Plan</b>			
<b>Hangar 51: Aircraft Intermediate Maintenance Facility (UNC)</b>			
<b>WARNING:</b> Designated personnel at this facility have been specifically tasked, trained, and equipped to respond to oil and hazardous substance spills. Unauthorized individuals shall never undertake the response or investigation to any actual or suspected oil or hazardous substance spills			
I. <b>IMMEDIATELY REPORT</b> spills by the most expeditious means (e.g., voice, telephone) to your supervisor, or contact the <b>FACILITY EMERGENCY COORDINATOR</b> as listed below:			
<b>Facility Emergency Coordinator</b>	<b>Shop</b>	<b>Title</b>	<b>Phone Ext.</b>
Jeff Roberts	900	Hazardous Waste Coordinator	2374
IF CONTACT CANNOT BE MADE WITH THE FACILITY EMERGENCY COORDINATOR, <b>REPORT SPILLS IMMEDIATELY</b> to:			
<b>FIRE DEPARTMENT EXT. 3333</b>			
Number of Persons Working at this site: 36			
II. <b>FIRE SAFETY PLAN</b>			
A. <b>Equipment</b>			
The hangar and workshop areas are equipped with CO <sub>2</sub> , halon, and dry chemical fire extinguishers. The office and shop areas are equipped with automatic sprinkler systems. Fire extinguishers are throughout the facility, specifically near each shop area and building exit. Fire alarms are in the same vicinity. Emergency response is initiated by fire alarm or from telephones in the shop/office areas.			
B. <b>Building Construction/Activity Description</b>			
Aircraft Intermediate Maintenance Department (AIMD) is housed in Hangar 51. The facility is cinder block with metal roof deck construction. AIMD is also responsible for maintaining a temporary hazardous waste storage area which is located approximately 25 yards north of Hangar 51. There are approximately 37 personnel who work in Hangar 50 an undetermined amount of whom may be onsite at any one time. The AIMD activity includes:			
<div style="margin-left: 40px;"> 900 Division - Aircraft Support Equipment and Maintenance  800 Division - Aviation Life Support  600 Division - Calibration and Instrument Repair </div>			
The hazardous materials coordinator and assistant have completed 24-hour hazardous materials response training and 10 other employees have completed 8-hour hazardous material technician training.			

<b>Immediate Spill Response Emergency Action Plan</b>	
<b>Hangar 51: Aircraft Intermediate Maintenance Facility (UNC)</b>	
<b>III. SITE HAZARDOUS SUBSTANCE INFORMATION</b>	
<b>A. Inventory</b>	
<p>While the activities performed in this facility require the handling and use of hazardous materials, all materials are maintained in daily-use quantities of 5 gallons or less, other than hazardous waste satellite accumulation areas. The activities performed by AIMD that use hazardous materials are specifically related to the maintenance and calibration of aircraft support equipment, aviation life support equipment, and calibration and repair of instruments and batteries. AIMD operations store flammable liquids such as paints and solvents in flammable storage lockers throughout Hangar 51. Typical categories of materials used and stored by AIMD include batteries, mercury, paints, flammable solvents, chlorinated solvents, and motor lubricants and fuels. Each Division is responsible for storing and handling the hazardous materials it uses. All flammable and hazardous materials are stored within each division area within National Fire Protection Association (NFPA) approved flammable material storage lockers. Table ANNEX 1 - 5.0, Typical Site Inventory: Hangar 51.</p>	
<b>B. Probable Spill Route</b>	
<p>The following spill scenarios were identified as most likely at AIMD Hangar 51 facility:</p> <p><u>Spill of Hazardous Substance at Temporary Hazardous Waste Storage Area:</u>  The specific materials stored in this area are clearly identified by appropriate labeling and other than spent batteries, most are stored in 55-gallon drums. The maximum spill potential for this site is approximately 55-gallons, albeit fire/explosion or introduction of water or fire-extinguishing media. While the area is effectively contained by a berm, the most likely path of migration is south onto the apron between Hangar 51 and Building T-22.</p> <p><u>Spill of Hazardous Substance In Hangar Area</u>  The specific materials used in this area include aircraft fuel, motor fuel, lubricants, lead-acid and NiCd batteries, and various solvents and paints. The solvents and paints used in this area are stored in the flammable storage lockers in the hanger or in the hazardous waste temporary storage area (Building T-22). The materials are either aerosols or are transferred to approved dispensers for use in the hanger area. The maximum spill potential within the hanger is from aircraft fuel and solvents (5 gal.). A spill in the hanger will drain to the south toward the airfield apron and a floor drain that extends along the hanger perimeter.</p>	
<b>C. Spill Response Equipment and Materials</b>	
<p>There are spill kits at the following locations within the AIMD facility:</p> <ul style="list-style-type: none"> <li>• Temporary Hazardous Materials Storage Area (Building T-22).</li> <li>• Northwest side of Hangar 51</li> </ul>	

Last updated: November 1994

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# LEGEND

- |    |                            |
|----|----------------------------|
| #  | - LOCATION I.D.            |
| 1  | - ETHYLENE GLYCOL          |
| 2  | - P-D-680                  |
| 3  | - MOTOR OIL/PETROLEUM      |
| 4  | - FRIABLE ASBESTOS         |
| 5  | - PETROLEUM OIL/HYDRAULIC  |
| 6  | - TRICO/HYDRAULIC FLUID    |
| 7  | - GLASS BEADS              |
| 8  | - PAINT/THINNERS           |
| 9  | - PAINT (AEROSOL CANS)     |
| 10 | - SULFURIC ACID            |
| 11 | - WASTE RAGS               |
| 12 | - WASTE PAINT SOLIDS       |
| 13 | - MERCURY-FILLED BATTERIES |

50 0 50  
SCALE FEET

## LEGEND

- |                                  |                                  |
|----------------------------------|----------------------------------|
| ● - FIRE ALARM                   | ⊕ - STAND PIPE                   |
| ⌂ - EMERGENCY EYEWASH AND SHOWER | SA - SATELLITE ACCUMULATION AREA |
| ■ - SUMP                         | ⊠ - FLAMMABLE LOCKER             |
| ⦿ - SPRINKLER                    | SD FLOW - SURFACE DRAINAGE       |

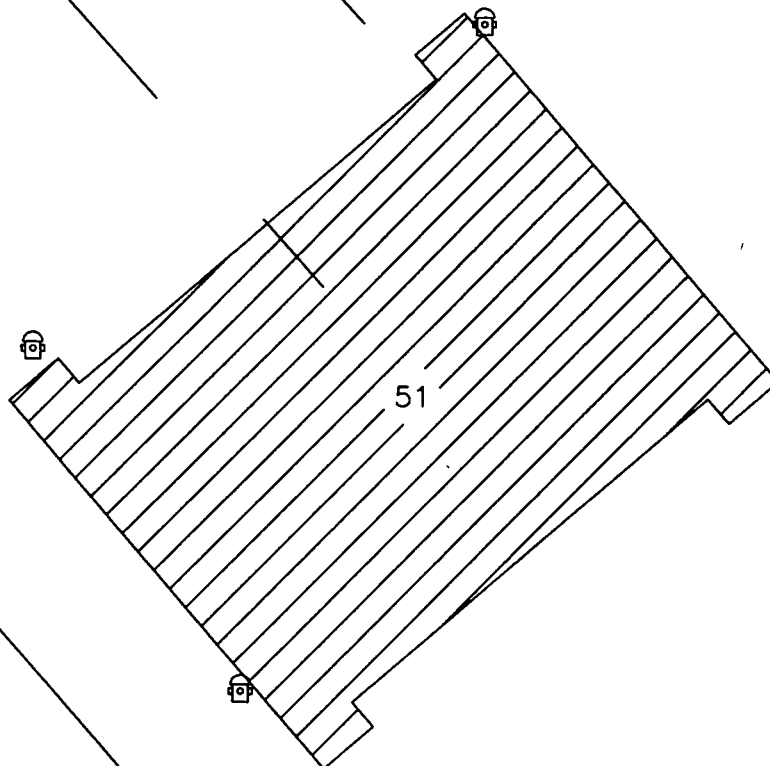


NAS CORPUS CHRISTI  
OHS CONTINGENCY PLAN

AIMD: UNC  
HANGAR 51  
FLOOR PLAN

DWG DATE: 01/14/97 | DWG NAME: 91CP06

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LEGEND

-  - FIRE HYDRANT
-  - MANHOLE
-  - STORM DRAIN

90 0 90  
SCALE FEET



NAS CORPUS CHRISTI  
OHS CONTINGENCY PLAN

HANGAR 51  
VICINITY PLAN

DWG DATE: 01/22/97

DWG NAME: 91CP05

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**List ANNEX 1 - 5.0**  
**Typical Site Inventory: AIMD Hangar 51**  
Last updated: November 1994

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NAME	QTY	FSC	NIIN	MANUFACTUR	CITYSTATE	MIL_SPEC	WORKCENTER	ANNUAL_USE	QUANTITY	LOCAT
REPAIR aerosol stripper				OMEGA LABORATORIES			900			900
SY				SPARTAN CHEMICAL CO. INC.			050			050
ROUNDUP L&G HERBICIDE				MONSANTO CO.			050			050
16VB279 GLID PREP #3				GLIDDEN COMPANY			900			900
STNLS. STILL. CLWR. & PLH				SPARTAN CHEMICAL CO. INC.			050			050
SUNNY SIDE				SPARTAN CHEMICAL CO. INC.			050			050
ON BASE SEALER				SPARTAN CHEMICAL CO. INC.			050			050
F-900 Torque Seal				ORGANIC PRODUCTS CO.			62B/800			62B/8
SHINLINE EMULSFIER PLUS				SPARTAN CHEMICAL CO. INC.			050			050
CRC-2-26				CRC CHEMICALS						
SUPER SPRAYBUFF				SPARTAN CHEMICAL CO. INC.			050			050
OSPHO METAL TREATMENT				SKYBRYTE COMPANY			900		13 BT	
POLYURETHANE THINNER				AUTOMOTIVE FINISHES INC						
PRIMER, EPOXY PT. A				THE SHERWIN-WILLIAMS CO.		E90 W Y14	900		KT	
BH38			00-503-6720	SPARTAN CHEM. CO.			900		40 GL.	WASHK
ENAMEL PRIMERS			MSDS# 15RS	E.I. du PONT de NEMOURS & CO		9140S	900		10 BT.	# 2
CROMAR TINTS, BALANCERS			MSDS# 18-1RS	E.I. duPONT de NEMOURS			900		16 GL.	# 2
CROMAR REDUCERS/ADDITIVES			MSDS# 18-4RS	E.I. duPONT de NEMOURS & CO		9405S	900		12 GL.	# 2
CHROMA CHEM MED YELLOW			NO LEAD PART	MUDEX INC.		NO LEAD PAINT				
PRIMER, EPOXY PT. B	1560		00-056-9222	BONDED PRODUCTS INC.		MIL-R-17882	900			900
REPAIR KT, FIBERGLASS	1560		00-056-9222	BONDED PRODUCTS INC.		MIL-R-17882	900		6 KT	000
PATCHBOND	2640		00-242-3467	PATCH RUBBER CO.						
LUBRICANT, TIRE	2640		00-256-5529	GSA			900		10 GL	#1
FLUX, SOLDERING	3439		00-069-5815			RMA 220-25	600		2 QT	#1
FLUX, PASTE	3439		00-225-9935	KESTER SOLDER CO.		O-F-506				
TIN ALLOY	3439		00-269-9610	BOW SOLDER PRODUCTS CO.		00-S-571	600			600
TIN SOLDER	3439		00-922-4555	FEDERATED-FRY METALS		00-S-571	62B			62B
ROSIN FLUX RB-RMA-25	3439		01-007-5494	FEDERATED FRY METALS INC		MIL-F-14256				
SOLDER .020 IN. DIA.	3439		01-008-7577	MEASUREMENTS GROUP		00-S-571	900		1 RL	SHOP
TIN ALLOY SOLDER	3439		01-008-7578	BOW SOLDER PRODUCTS CO.		00-S-571E	62B			62B
SOLDER .022 IN. DIA.	3439		01-008-7579	MEASUREMENTS GROUP		00-S-571	600		3 RL	600
POWER PAK	3740		00-003-6444	CROWN INDUS. PRO. CO.			900		121 CN	#1
SPRAY KIT, SELF PRESSURE	4940		00-003-6444	CROWN INDUSTRIAL PRODUCTS			900			900
BOOT REMOVER, RED DEVIL	4940		01-159-8269	MECCO MANUFACTURING CO.			900			900
GLASS SPHERES	5350		00-950-9766	FLEX-O-LITE		MIL-G-9954	900		250 LB.	HGR.
GLASS BEADS	5350		00-950-9766	CATAPHOTE DIV/FERRO CORP						
NON-SKID WALKWAY COMP.	5610		00-641-0429	AKRON PAINT & VARNISH CO.		MIL-W-5044	900		3 GL	# 3
DC 1-2577 CONFORMAL CTG.	5970		00-402-2323	DOW CORNING CORP.		DC12577	600		1 BTL	600
HUMISEAL 1815H	5970		00-990-4924	COLUMBIA CHASE						
HUMISEAL 1815	5970		00-990-4924	COLUMBIA CHASE CORP.			600		2 CN	600
PD-16 RED PLASTI-DIP	5970		01-030-0593	P D I INC.			600		2 CN	600/6
HUMISEAL 1873	5970		01-272-6041	COLUMBIA CHASE CORP.			600		1 CN	600
INSULATING COMPOUND, ELE.	5970		01-272-6041	HUMISEAL DIVISION/CHASE			900			900
BATTERY, MERCURY	6135		00-050-7109	DURACELL USA			600/800			600/8
BATTERY (BA1574/U)	6135		00-073-0939				600/800			600/8
BATTERY, MERCURY	6135		00-073-0939	BATTERY ASEMBLY INC.			600/800			600/8
BATTERY, MERCURY	6135		00-204-1406	DURACELL USA			600/800			600/8
BATTERY (BA 1568/U)	6135		00-030-0706				600/800			600/8
BATTERY, MERCURY	6135		01-164-3561	COMAX CORP.			600/800			600/8
THIMERSOL SOLUTION	6505		00-128-5695	ELI LILLY CO.			000			000
OIL, USP	6505		00-133-6000	MOYCO INDUSTRIES, INC.			000			000
ALCOHOL	6505		00-299-0095	ACCORDING TO SPEC.S			900		5 GL	# 1
KLEENOL	6520		00-145-0330	KERR MANUFACTURING CO.			690		1 KT	600
GERMILETOL PART B	6520		00-145-0330	KERR MFG. CO			690		1 KT	600
INDICATING GEL	6605		00-251-0931	DAVISON CHEMICAL DIVISION			670			670
NAPHA, ALIPHATIC	6810		00-230-0119	CSD INC.		TT-H-95B TY II	900		2 GL	# 2
ALIPHATIC NAPHA	6810		00-230-0119	UNION OIL CO.		TT-H-95	900			900
BATTERY ACID	6810		00-249-9354	AMERICA BATTERY ACID CORP		O-S-001	620		A GL	BAT 1

NAME_NOMEN	FSC	NIIN	MANUFACTUR	CITYSTATE	MIL_SPEC	WORKCENTER	ANNUAL_USE	QUANTITY	LOCAT:
CHARTERSOL 210-66	6810	00-265-0664	CHARTER CHEMICALS		TT-N-95				
TT-N-95, TYPE II	6810	00-265-0664	PHIPPS PRODUCTS CO.		TT-N-95				
TOLUENE, TECHNICAL	6810	00-281-2002	SUN REFINING & MARKETING		TT-T-542	800		1 BT	800
1EK(METHYL ETHYL KEYTONE)	6810	00-281-2762	CSD INC.		TT-N-261	900			900
1EK	6810	00-281-2785	CSD INC.		ASTM D 740-84	900		GAL. CN	
1ETHYL ETHYL KEYTONE	6810	00-281-2785	UNION CARBIDE			900			900
1EK(METHYL ETHYL KEYTONE)	6810	00-281-2785	UNICAL CHEMICAL			900			900
SODIUM BICARBONATE	6810	00-290-5574	FISHER SCIENTIFIC CO.		O-S-576	620		50 LB	BAT L
1.1.1-TRICHLOROETHANE,TEC	6810	00-474-5612	DOW CHEMICAL U.S.A.		MIL-T-82533				
1.1.1 TRICHLOROETHANE	6810	00-476-5612	PPG INDUS. INC.		MIL-T-81533				
1.6822 CHLOROTHEME	6810	00-476-5612	DOW CHEMICAL		MIL-T-81533				
TRI-ETHANE 1.1.1 TRICHLOR	6810	00-476-5612	PPG INDUSTRIES		MIL-T-81533				
SODIUM HYPOCHLORITE SOLUT	6810	00-590-7316	LABBCO INCORPORATED			800			800
1.1.1-TRICHLOROETHANE TEC	6810	00-664-8387	CASCADE CHEM. INC.		O-T-620	600/800		1 GL	600
1,1,1-TRICHLOROETHANE	6810	00-664-8387	C.S.D. INC.		O-T-620C	690			600
ISOPROPYL ALCOHOL TECH.	6810	00-753-4993	UNION CARBIDE CORP.		TT-I-735	600		8 BT	600
MOLYBDENUM,DISULFIDE	6810	00-816-1025	NOAH INDUSTRIAL CORP.		MIL-M-7866	900		3 BT	# 4
1.1.1. TRICHLOROETHANE	6810	00-930-6311	PLAZE INC.		O-T-620C TYIII	600		5 CN	600
TALC, TECH.	6810	01-000-9589	CHEMICAL COMMODITIES INC		MIL-T-50036	800		1 CN	
ISOPROPYL ALCOHOL TECH.	6810	01-220-9907	VAN WATER & ROGER		TT-I-735	900		11 GL	# 1
ISOPROPYL ALCOHOL TECH.	6810	01-220-9907	RANDOLPH PRODUCTS CO.		TT-I-735				
ISOPROPYL ALCOHOL TECH	6810	01-220-9907	AAPER ALCOHOL & CHEM. CO.		TT-I-735	800		1 GL	# 2
NITROGEN, TECHNICAL	6830	00-244-2741	BOUGHT TO SPECS.		BR-N-411	ALL		16 CY	HGR. 1
LEANING & LUB COMP ELEC	6850	00-003-5295	CHEMTRONICS INC.		MIL-C-83360 TY1	600		5 CN	600
LEANING COMP, A/C SURF	6850	00-005-5305	BULK CHEMICAL DIST. INC.		MIL-C-43616	900		10 CN	#1 & #
LEANING COMP. AIRCRAFT	6850	00-005-5305	SPEER PRODUCTS INC		MIL-C-43616	ALL/ERL		12CN/4CN	#1-#E1
TRICHLOROTRIFLUOROETHANE	6850	00-033-0051	ALLIED CORP. CHEMICAL		MIL-C-81302D TY2				
LEANING COMP., 1.1.3.	6850	00-105-3004	AIROSOL CO. INC.		MIL-C-81302	600/ERL		1CN/1CN	1CN/1
TRICHLOROETHANE SOLVENT	6850	00-105-3004	MICRO CARE CORP.			ERL		1 CN	ERL
INSPECTION PENETRANT REM	6850	00-142-0040	AMERICAN GAS & CHEM CO.		MIL-I-25135	900/NDI		42 PT	#3
LEANING COMP. AVIONIC	6850	00-140-7161	CHEMTRONICS INC.		MIL-C-81964				
LEANING COMP., AVIONIC	6850	00-140-7161	OMNITECH INT. INC.		MIL-C-81964			CN	
SILICONE COMPOUND	6850	00-177-5094			G-642	600		2 TU	600
LEANING COMPOUND	6850	00-224-6665	AMERICAN FINISH & CHEM CO		MIL-C-11090	900		CN	
ORROSION REMOVING COMP.	6850	00-270-5551	CONTINENTAL CHEM		MIL-C-10570	900		2 GL	#1
D-600 DRYCLEANING SOL.	6850	00-274-5421	CHARTER CHEMICALS		P-D-600				
RY CLEANING SOLVENT	6850	00-274-5421	UNION OIL CO. OF AMERICA		P-D-600	900		3' GL	#1
D-600 DRYCLEANING SOL.	6850	00-274-5421	CSD INC.		P-D-600				
D-600 DRYCLEANING SOL.	6850	00-274-5421	KERR-MCGEE CHEMICAL		P-D-600				
D-600 DRYCLEANING SOL.	6850	00-274-5421	KLERR-FLO CO.		P-D-600				
RY CLEANING SOLVENT	6850	00-274-5421	HOME OIL CO.			900			900
-641 SILICONE COMPOUND	6850	00-201-4033	GENERAL ELECTRIC CO.			610		1 BTL	600
SILICONE COMPOUND	6850	00-201-4033	R.H. CARLSON, INC.		MIL-C-47113	900			900
ESICCANT	6850	00-290-0042	MOLECULAR PRODUCTS		MIL-D-37160	900			900
TRICHLOROTRIFLUOROETHANE	6850	00-319-0034	BULK CHEM DIST. INC.		MIL-C-81302 TY II				
REGON	6850	00-405-9305	CHEMTRONICS INC.			670			670
RGX MERCURY DECONTAMINANT	6850	00-495-5506	ACTION ASSOCIATES			620	AR	1 CN	BAT L
EAK TEC	6850	00-621-1020	AMERICAN GAS & CHEMICAL		MIL-L-25567 TY1	ALL		10 BT	ALL
EAK TEC	6850	00-621-1020	GENERAL CHEMICAL INC.		MIL-L-25567A TY1				
EAK TEST COMPOUND	6850	00-621-1020	BULK CHEM. DIST. INC.		MIL-L-25567	ALL		BT	
NTIFREEZE	6850	00-664-1403	CHEMICAL SPEC. & DEVEL.		A-A-070A	900		50 GL	# 1
NTIFREEZE	6850	00-664-1403	OLD WORLD TRADING CO.		CID A-A-070	900		9 GL	
NTIFREEZE	6850	00-664-1403	OLD WORLD AUTOMOTIVE PROD			900			
ESICCANT, ACTIVATED	6850	00-600-2234	GRACE & CO.			900			900
LEAN COMPOUND	6850	00-753-4990	OMEGA CHEMICAL		MIL-C-22542	900		2 DRUM	900
NTI-FOGGING COMPOUND	6850	00-754-2672	ALFA-KLEEN CHEM.			800/900		12BT/5BT	800/900
NTIFOG COMPOUND	6850	00-754-2672	PUMA CHEMICAL		O-A-549	810			810
ENETRANT	6850	00-702-2740	AMERICAN GAS & CHEMICAL C		MIL-I-25135	900			900
AGNE-TECH SY8000A	6850	00-041-1347	ARDROX INC.			900/NDI		152 OZ.	#2

NAME/MODEL	FSC	MIIN	MANUFACTUR	CITY/STATE	MIL_SPEC	WORKCENTER	ANNUAL_USE	QUANTITY	LOCATI
SILICONE COMPOUND 6624	6850	00-888-7616	GENERAL ELECTRIC CO.		MIL-S-8660	800		800	
COMPOUND	6850	00-888-7616	DOW CORNING CORP		MIL-S-8660	800		6 TU	81A
SILICONE COMPOUND 6624	6850	00-888-7617	GENERAL ELECTRIC CO.		MIL-S-8660	800			800
ANTISTATIC&CLEANER COMP.	6850	00-882-6690	WESTON INSTRUMENTS			600		1 BTL	600
WINDSHIELD CLEANING COMPOU	6850	00-926-2275	REXSELLIX LABORATORIES		O-C-1981 AND 1	900			900
SCALE REMOVING COMPOUND	6850	00-949-1397	OCTAGON PROCESS INC.		P-S-120	900		4 GL	#1
PENETRATING FLUID	6850	00-973-9091	LHB INDUSTRIES		O-P-1731	900			900
1.1.3 TRICO ELECT. GRADE	6850	00-984-5853	ALLIED CHEMICAL CO.		MIL-C-81302	600/900		3GL/20GL	600/W
CLEANING COMPOUND, SOLV.	6850	00-984-5853	DU PONT EI DE MEMOURS		MIL-C-81302	900			900
TRICHLOROTRIFLUOROETHANE	6850	00-984-5853	FREON PRODUCTS DIVISION			900/600			900/6E
TOOL CRIB BLUE LAYOUT	6850	01-015-0034	SEYMOUR OF SYCAMORE INC.			900		2 CN	#4
TONER, MICROFICHE PRINTER	6850	01-135-3125	HILORD CHEMICAL CORP.						
TONER, MICROFICHE PRINTER	6850	01-135-3125	ESGRAPH INC.						
TONER, MICROFICHE PRINTER	6850	01-135-3125	HILORD CHEMICAL CORP.			600		4 BTL	600
D-5 DEGREASER CLEANING CO	6850	01-201-0635	GREEN MOUNT. CORP.			900		4 GL	#1
HGX MERCURY DECONTAMINANT	6850	01-230-8556	ACTON ASSOCIATES			620		1 CN	600
ANGELS INK	7510	00-161-4229	SUPERIOR MARKING EQUIP.CO			810			800
INK, MARKING PARACHUTE	7510	00-286-5362	AMERICAN WRITING INK CO.		MIL-I-6903	800		2 BT	800
TAPE	7510	00-916-9659				ERL		3 RL	ERL
JAX,FLOOR,WATER EMUL.	7930	00-141-5888	HILYARD CHEMICAL CO.		P-W-155				
SCOURING POWDER	7930	00-205-0442	FAULTLESS STARCH		P-S-311	ALL		1 CN	600
DETERGENT, GEN. PURPOSE	7930	00-282-9699	CSD INC.		MIL-D-16971				
DETERGENT, GEN. PURPOSE	7930	00-282-9699	LIGHTHOUSE FOR THE BLIND		MIL-D-16791	ALL		6 GL	600/#1
CLEANER, ALL PURPOSE	7930	00-924-5200	LIGHTHOUSE FOR THE BLIND		P-D-1747	ALL		5 BTL	600
POLISH, PLASTIC	7930	00-935-3794	PERMATAX INDUSTRIAL DIV.		P-P-560				
POLISH, PLASTIC	7930	00-935-3794	RAIKEN INC		P-P-560	800/900		8CN/19CN	81A/#4
ENAMEL, BLACK FLAT	8010	00-067-5437	LHB INDUSTRIES		TT-E-488B	900		4 PT	#3
ENAMEL, BLUE	8010	00-079-2752	LHB INDUSTRIES		TT-E-488B				
ACQUER, RED	8010	00-079-2754	LHB INDUSTRIES		CID A-A-665C				
ACQUER, RED	8010	00-079-2774	PLASTI-KOTE		CID-AA-665-A				
ENAMEL, BLACK	8010	00-079-3752	CHEMICAL COMMODITIES AGEN		TT-E-00400				
ENAMEL, BLACK GLOSS	8010	00-079-3752	LHB INDUSTRIES		TT-E-488B				
ENAMEL, GRAY	8010	00-079-3756	LHB INDUSTRIES		TT-E-488B				
ENAMEL, GREEN	8010	00-079-3758	LHB INDUSTRIES		TT-E-488B				
ENAMEL, GLOSS WHITE	8010	00-079-3762	BORDEN INC. KRYLON DEPT						
ENAMEL, YELLOW	8010	00-079-3764	LHB INDUSTRIES		TT-E-488B				
ACQUER, YELLOW	8010	00-141-2950	LHB INDUSTRIES		CID-AA-665-A	600/900		1CN/1PT	600/#3
ACQUER, YELLOW	8010	00-141-2950	PLASTI-KOTE		CID-AA-665-A				
ACQUER, GREEN	8010	00-141-2951	LHB INDUSTRIES		CID A-A-665C	900		2 PT	#3
ACQUER,RED	8010	00-141-2952	PLASTI-KOTE		CID-AA-665-A				
ACQUER, GREY	8010	00-141-2958	SEYMOUR OF SYCAMORE		A-A-65				
THINNER, SYN. RESIN	8010	00-160-5796	STIC ADHESIVE PROD. INC.		TT-E-306				
REMOVER, PAINT	8010	00-181-7568	ELDORADO CHEM CO. INC.		MIL-R-81294	900		5 GL	#1
ACQUER(PAINT)	8010	00-181-7791	LHB INDUSTRIES		MIL-E-81352A	920			900
THINNER, POLYURETHANE	8010	00-181-8000	HONE OIL CO.		MIL-T-81772B	900			900
THINNER POLYURETHANE	8010	00-181-8000	AUTOMOTIVE FINISHES INC.		MIL-T-81772B TY1				
THINNER, PAINT PRODUCT	8010	00-181-8000	C S D INC.		MIL-T-81772	900		8 GL	#2
THINNER, POLYURETHANE	8010	00-181-8000	DEFT CHEMICAL COATINGS		MIL-T-81772				
THINNER A/C COATING	8010	00-181-8000	CHEMICAL SPEC. & DEVELOP		MIL-T-81772B	900		2 GL	#2
POLYURETHANE, BLACK	8010	00-181-8276	DEFT INC.		MIL-C-83286	900			900
POLYURETHANE	8010	00-181-8281	DEFT		MIL-C-83286	900		2GL KIT	900
POLYURETHANE	8010	00-181-8282	DEFT, INC.		MIL-C-83286	900			900
ISOCYANATE PT.B	8010	00-181-8287	DEFT INC.		MIL-C-83286B	900		KT	
POLYURETHANE, YELLOW PT.A	8010	00-181-8287	DEFT INC.		MIL-C-83286B	900		KT	
THINNER, PAINT TY I	8010	00-242-2009	CHEMICAL SPEC. & DEV.		TT-T-291F	900		CN	
THINNER, A/C COATING	8010	00-200-1751	CHEM SPECIALISTS & DEVELO		MIL-T-81772B				
ENAMEL, ALKYD GLOSS COMPL	8010	00-206-7731	CON-LUX COATINGS, INC.		TT-E-489F, CL.A,	900			900
ACQUER, BLACK	8010	00-290-6894	NATIONAL AEROSOL						
DR036 CONCENTRATE	8010	00-290-6983	DEVCO & RAYNOLDS		TT-L-50				

NAME_NOMEN	FSC	NIIN	MANUFACTUR	CITYSTATE	MIL_SPEC	WORKCENTER	ANNUAL_USE	QUANTITY	LOCAT:
PAINT, ACRYLIC	0010	00-290-6983	DEVUE & RAYNOLDS CO. INC		TT-L-50				
LACQUER, ACRYLIC	0010	00-290-6983	ILLINOIS BRONZE		A-A-65				
LACQUER, WHITE	0010	00-290-6983	SEYMOUR OF SYCAMORE		CID A-A-665C	600/900		1 CN/4PT	600/N
LACQUER, WHITE	0010	00-290-6983	LHB INDUSTRIES		TT-L-50				
LACQUER, BLACK	0010	00-290-6984	DEVUE & RAYNOLDS CO.		TT-L-50				
LACQUER, BLACK	0010	00-290-6984	ILLINOIS BRONZE PAINT CO		A-A-65				
LACQUER, BLACK	0010	00-290-6984	SEYMOUR OF SYCAMORE		CID A-A-665C	900		12 CN	# 3
LACQUER, GLOSS BLACK	0010	00-290-6984	LHB INDUSTRIES		TT-L-50	600/800		1CN/6CN	600/8
LACQUER, BLACK	0010	00-290-6984	SPRAYON PRODUCTS		TT-P-1757A	900		6 PT	#3
PRIMER, ZINC CHROMATE	0010	00-297-8593	LHB INDUSTRIES		A-A-665	600		2 CN	600
LACQUER, CLEAR	0010	00-515-2487	ILLINOIS BRONZE		MIL-L-19537				
LACQUER, ACRYLIC	0010	00-551-7934	PRAT & LAMBERT		MIL-L-19537C	800		1 CN	81A
TAMPER DOT	0010	00-551-7934	KOP-COAT INC		MIL-L-19537				
TAMPER DOT	0010	00-551-7934	AMERON INDUSTRIAL		CID A-A-665C	900		12 CN	# 3
LACQUER, FLAT BLACK	0010	00-582-5382	LHB INDUSTRIES		TT-L-50				
LACQUER, ORANGE	0010	00-584-3148	PACIFIC AEROSOL		CID-AA-665-A				
LACQUER, ORANGE	0010	00-584-3148	PLASTI-KOTE		CID A-A-665C				
LACQUER, WHITE	0010	00-584-3150	LHB INDUSTRIES		CID A-A-665C				
LACQUER, GREEN	0010	00-584-3154	LHB INDUSTRIES						
LACQUER, CLEAR	0010	00-598-7047	PRATT & LAMBERT INC.			900			900
ALUMINUM, SPRAY PAINT	0010	00-615-2027	KRYLON			900		2 PT	#3
PRIMER, GRAY	0010	00-616-9181	LHB INDUSTRIES		CID A-A-1551	600		1 CN	600
WALKWAY NONSLIP TYPE II	0010	00-641-8427	AKRON PAINT & VARNISH INC						
LACQUER, ORANGE	0010	00-721-9479	LHB INDUSTRIES		CID A-A-665C				
LACQUER, GREEN	0010	00-721-9483	LHB INDUSTRIES		CID A-A-665C				
LACQUER, IVORY	0010	00-721-9487	LHB INDUSTRIES		CID A-A-665C				
LACQUER, RED	0010	00-721-9743	LHB INDUSTRIES		CID-AA-665-A				
LACQUER, YELLOW	0010	00-721-9744	LHB INDUSTRIES		CID A-A-665C				
LACQUER, YELLOW	0010	00-721-9745	LHB INDUSTRIES		CID A-A-665C				
LACQUER, BLUE	0010	00-721-9746	LHB INDUSTRIES		CID A-A-665C				
LACQUER, BLUE	0010	00-721-9747	ILLINOIS BRONZE		TT-L-50				
LACQUER, BLUE	0010	00-721-9747	DEVUE & RAYNOLDS		TT-L-50				
LACQUER, BLUE	0010	00-721-9747	NATIONAL AEROSOL PROD.		A-A-665				
LACQUER, BLUE	0010	00-721-9747	LHB INDUSTRIES		CID A-A-665C	900		5 PT	#3
LACQUER, BLUE	0010	00-721-9748	LHB INDUSTRIES		CID A-A-665C				
LACQUER, GRAY	0010	00-721-9749	LHB INDUSTRIES		CID A-A-665C				
LACQUER, GRAY	0010	00-721-9750	LHB INDUSTRIES		CID A-A-665C	600/900		1 CN	600
LACQUER, ALUMINUM	0010	00-721-9751	LHB INDUSTRIES		CID A-A-665C	900		1 PT	#3
LACQUER, BLUE	0010	00-721-9752	NATIONAL AEROSOL PROD.		TT-L-50				
LACQUER, BLUE	0010	00-721-9753	LHB INDUSTRIES		CID A-A-665C				
LACQUER, GRAY	0010	00-721-9754	LHB INDUSTRIES		CID A-A-665C				
LACQUER, GRAY	0010	00-835-7215	LHB INDUSTRIES		CID A-A-665C				
ENAMEL, YELLOW	0010	00-852-9833	LHB INDUSTRIES		TT-E-489H	900			
LACQUER, GREEN	0010	00-883-5329	LHB INDUSTRIES		CID A-A-665C	900		3 PT	#3
PRIMER, ZINC CHROMATE	0010	00-899-8825	KOPPERS COMPANY		TT-P-1757				
INC CHROMATE, YELLOW	0010	00-899-8825	LHB INDUSTRIES		TT-P-1757A	900			900
PRIMER, ZINC CHROMATE	0010	00-899-8825	RANDOLPH PRODUCTS CO		TT-P-1757				
PRIMER, ZINC CHROMATE	0010	00-899-8825	MANX IND. INC.		TT-P-1757				
WHITE ACRYLIC LACQUER	0010	00-935-6689	LHB INDUSTRIES		MIL-L-81352A	900			900
CRYLIC, GREY	0010	00-935-7076	AMERON INDUSTRIAL		MIL-L-81352				
LACQUER, YELLOW	0010	00-965-2389	LHB INDUSTRIES		CID A-A-665C				
LACQUER, GREEN	0010	00-965-2390	LHB INDUSTRIES		CID A-A-665C				
LACQUER, GRAY	0010	00-965-2391	LHB INDUSTRIES		CID A-A-665C				
LACQUER, GREEN	0010	00-965-2392	LHB INDUSTRIES		CID A-A-665C				
GO-SURE PENETRATING FLUID	0010	00-973-9091	LHB INDUSTRIES		O-P-1731				
POXY/PA GLOSS ENGINE GR	0010	01-053-2650	AKZO COATING INC.		MIL-C-22758D	920			900
POXY POLYAMIDE	0010	01-193-0519	DEFT INC.		MIL-P-53830	900			900
OLYURETHANE, YELLOW PT.A	0010	01-265-9153	DEFT INC.		MIL-C-85285B TYII	900		KT	
PHATIC ISOCYANATE PT.B	0010	01-265-9153	DEFT INC.		MIL-C-85285B TYII	900		KT	

NAME_NOMEN	FSC	NIIN	MANUFACTUR	CITYSTATE	MIL_SPEC	WORKCENTER	ANNUAL_USE	QUANTITY	LOCAT
301-VIDEOTAP	8810	01-293-8789	DEFT, INC.		MIL-C-85285B,17925	900			900
WHITE PT A	8810	01-293-8789	AKZO COATINGS INC.		MIL-C-85285 TY II	900		KT	
ALIPHATIC ISOCYANATE	8810	01-293-8789	DEFT, INC.		MIL-C-85285B	900			900
ALIPHATIC ISOCYANATE PT B	8810	01-293-8789	AKZO COATINGS INC.		MIL-C-85285 TY II	900		KT	
TOP COAT, YELLOW PT. A	8810	01-293-3011	DEXTER CROWN MET. AERO.		MIL-C-85285	900		KT	
GARDENER PT. B	8810	01-293-3011	DEXTER CROWN MET. AERO.		MIL-C-85285	900		KT	
PAINT, WHITE COMP. B	8810	01-313-8700	CRAWFORD LABORATORIES		MIL-C-22750E	900			900
PAINT, WHITE COMP. A	8810	01-313-8700	CRAWFORD LABORATORIES		MIL-C-22750E	900			900
PRO SEAL 870, PT. A	8830	00-008-7207	PRODUCTS RES. & CHEM. CO.		MIL-S-81733	900			
SEALING COMPOUND	8830	00-008-7207	PRODUCT RESEARCH & CHEM.		MIL-S-81733	900		10 KT	# 1
GRADE 4	8830	00-062-5866	ASHLAND OIL INC.		MIL-C-16173D				
TECTYL 846 (GRADE 4)	8830	00-062-5866	VALVOLINE			900		2 GL	#3
NOKORODE 731	8830	00-062-6950	LION OIL COMPANY			900			900
232 ANAEROBIC	8830	00-081-2333	HERNOM MFG. INC.			800		1 BT	800
SEALING COMPOUND	8830	00-105-0823	PRODUCTS RESEARCH & CHEM						
SS-4004 SILICONE PRIMER	8830	00-142-9128	GENERAL ELECTRIC CO.		MIL-S-23586	600			600
CORROSION RESISTANT COAT	8830	00-142-9272	TURCO PROD. INC.		MIL-C-81706				
TURCO W. O. #1	8830	00-145-0084	TURCO PROD. INC.		MIL-C-10578D TY1	900		5 GL	#1
TURCO W.O. #1	8830	00-145-0084	TURCO PRODUCTS INC.			900			900
TC-3-VITRA-TITE	8830	00-163-5792	THE OAKLAND CORP.			610		1 BTL	600
TECTYL 165-G	8830	00-221-1834	ASHLAND OIL, INC.		MIL-C-8083933A	900			900
ANTI SEIZE LUBE	8830	00-286-5453	JET LUBE INC.		MIL-A-907E	900			900
RUBBERIZED UNDERCOAT	8830	00-546-8621	AEROSOL MAINTENANCE PRODT		TM-2020	900			900
ALOX2020CM-3	8830	00-546-8637	ALOX CORPORATION		MIL-C-81309 TY3	900		1 PT	#1
ACF-50	8830	00-546-8637	LEAR CHEM. RESEARCH CORP.						
ANTISEIZE COMPOUND	8830	00-597-5367	AMMITE LABORATORIES		MIL-A-907				
COMPOUND	8830	00-597-5367	THE LOCKREY CO. INC		MIL-A-907				
COMPOUND	8830	00-597-5367	JET-LUBE INC.		MIL-A-907	900		2.5 LB.	#4
PERMATAX SEALING COMP.	8830	00-599-7753	PERMATAX COMPANY INC.						
POLYSULFIDE SEALANT	8830	00-881-2618	J&R INDUSTRIES INC		WS-516				
LEAD DIOXIDE PASTE	8830	00-881-2618	J&R INDUSTRIES INC		WS-516A	600		5 CA	600
RETAINING COMPOUND	8830	00-891-8358	HERNOM MFG INC		MIL-R-46082	620			620
CORROSION PREV. COMPOUND	8830	00-903-0931	STEVEN INDUSTRIES		MIL-C-10173D G4				
CORR. PREV. COMP.	8830	00-936-1947	BULK CHEMICAL DIST. CO.		MIL-C-81309D	ALL		5 CN	600
CORROSION PREVENTION COMP	8830	00-938-1947	HOLT LLOYD CORP		MIL-C-81309D	ALL/ERL		/5CN	/ERL
ALOX 2020CM TY2 CL2	8830	00-938-1947	ALOX CORPORATION		MIL-C-81309	900		3 PT	#1
EDGE SEALER	8830	01-026-5562	3M COMPANY			900		1 KIT	900
ML-GARD	8830	01-041-1596	BULK CHEMICALS DIST. INC		MIL-C-85054	600/ERL		2 CN/4CN	600/EI
CORR. PREV. COMP. AEROSOL	8830	01-041-1596	LHB INDUSTRIES		MIL-C-85054	900			900
SEALING COMP. RTV 1473	8830	01-202-3962	GENERAL ELECTRIC CO.						
EPOXY PART B	8830	01-313-8700	CRAWFORD LABS		MIL-C-32750	900			900
EPOXY PART A	8830	01-313-8700	CRAWFORD LABS		MIL-C-32750	900			900
3151 EPOXY PATCH KT PT B	8840	00-061-8303	HYSOL DIV THE DEXTER CORP			600		2 KT	600
3151 EPOXY PATCH KT PRT A	8840	00-061-8303	HYSOL DIV. THE DEXTER COR			600		2 KT	600
ADHESIVE SEALANT	8840	00-118-2695	POLYMERIC SYSTEMS, INC.		MIL-A-46146	900			900
SI 690 PRIMER TYPE I	8840	00-118-2695	POLYMERIC SYS. INC						
SI 631 SILICONE SEALANT	8840	00-118-2695	POLYMERIC SYS. INC						
TV8112	8840	00-142-9128	GENERAL ELECTRIC CO.		MIL-S-23586D	600			600
TV8262	8840	00-142-9128	GENERAL ELECTRIC CO.		MIL-S-23586D	600			600
TV8111	8840	00-142-9128	GENERAL ELECTRIC CO.		MIL-S-23586D	600			600
ADHESIVE,CYANOACRYLATE	8840	00-142-9193	THREE BOND OF AMERICA INC		MIL-A-46050C TY2	900		6 BT	#4
3145 RTV	8840	00-145-0020	DOW CORNING CORP.			600		2 TU	600
TV 189	8840	00-145-0020	GENERAL ELECTRIC CO.						
3M SUPER FOAM FAST ADHES.	8840	00-181-7761	3M			800/900		6 CN/6CN	800/900
WELD-ON #2 PART A	8840	00-266-0015	INDUSTRIAL POLYCHEMICAL			600		1 KT	600
WELD-ON #2 PART B	8840	00-266-0015	INDUSTRIAL POLYCHEMICAL			600		1 KT	600
S-1293 MM-A-12	8840	00-273-0717	CLIFFTON ADHESIVE		MM-A-121	800			800
EMENT, NEOPRENE CONTACT	8840	00-273-0717	CLIFFTON ADHESIVE		MM-A-121				
FA-1051	8840	00-290-4301	STEVEN INDUSTRIES, INC.		MM-A-1217	600			600

NAME NOMEN	FSC	NIIN	MANUFACTUR	CITYSTATE	MIL_SPEC	WORKCENTER	ANNUAL_USE	QUANTITY	LOCAT
PA-1051	8840	00-290-4301	CLIFTON ADHESIVE INC		MM-A-1617ATY2	600		1 CN	
ADHESIVE	8840	00-515-2246	TRANSWORLD ADH. & CHEM CO		MIL-A-5540	900			
ADHESIVE, POLYCHLOROPRENE	8840	00-515-2246	SHORE-UBS CHEM. CO.		MIL-A-5540	800		10 CN	81A
GEOPRENE SOLVENT ADHESIVE	8840	00-515-2246	TACC INTERNATIONAL CORP		MIL-A-5540B	810			800
ADHESIVE	8840	00-515-2246	CLIFTON ADHESIVE		MIL-A-5540B C3				
WITE-SEAL PVC SOLVENT CEM	8840	00-573-1502	RADIATOR SPECIALTY CO.		ASTM-D-2564	800			800
EPK 309 PART A	8840	00-689-7442	HYSQL DIV. DEXTER CORP		309 GRAY	600		2 TU	600
EPK 309 PT B	8840	00-689-7442	HYSQL A & I.P. DIVISION		309 GRAY	600		2 TU	600
ADHESIVE CREST 2079A	8840	00-753-4000	CREST PRODUCTS CORP.		MM-A-187				
ADHESIVE CREST 2079B	8840	00-753-4000	CREST PRODUCTS CORP.		MM-A-187				
ADHESIVE, GEN. PURPOSE	8840	00-753-4000	BONDED PRODUCTS INC.		MM-A-187B				
ADHESIVE, GLUE	8840	00-754-2485	STEVEN INDUSTRIES		MM-A-180C	800		1 BT	800
SI-601 SILICONE SEALANT	8840	00-833-9563	POLYMERIC SYSTEMS INC.			800		3 TU	81A
32 MULTI PURP SEALANT	8840	00-843-0002	DOW CORNING CORP.		MIL-A-46106A T1	600		5 TU	600
PRIMER, GRAY LACQUER	8840	01-063-7509			1204	600		1 GL	600
SEALANT SILICONE RTV 106	8840	01-145-1760	GENERAL ELECTRIC CO.			900		1 TU	#1
LINER KT. PART C	8475	00-200-9275	STRATOTECH CORP.		MIL-P-83379	800		KT	800
LINER KT. PART A	8475	00-200-9275	STRATOTECH CORP.		MIL-P-83379A	800		KT	800
LINER KT. PART B	8475	00-200-9275	STRATOTECH CORP.		MIL-P-83379	800		KT	800
MASTER RELEASE # 3	8475	00-534-2312	FREEMAN MFG.						
INNERBOND 2010 FLUID	9150	00-024-9621	INLAND PACKAGING INC.		VV-D-1070B				
HYDRAULIC FLUID	9150	00-149-7432	AMERICAN OIL & SUPPLY		MIL-H-83202				
HYDRAULIC FLUID	9150	00-149-7432	BRAY OIL CO.		MIL-H-83202				
HYDRAULIC FLUID	9150	00-149-7432	ROYAL LUBRICANTS CO.		MIL-H-83202				
HYDRAULIC FLUID	9150	00-149-7432	PENRECO		MIL-H-83202				
HYDRAULIC FLUID	9150	00-149-7432	MATCO CHEMICAL CORP.		MIL-H-83202				
HYDRAULIC FLUID	9150	00-149-7432	GULF OIL CO.		MIL-H-83202A				
HYDRAULIC FLUID	9150	00-180-6290	CASTROL INC.		MIL-H-83202				
HYDRAULIC FLUID	9150	00-180-6290	LUBRICATING SPECIALTIES C		MIL-H-83202				
HYDRAULIC FLUID	9150	00-180-6290	ROYAL LUBRICANTS CO. INC		MIL-H-83202				
GREASE, AIRCRAFT	9150	00-181-7724	ROYAL LUBRICANTS		MIL-G-81322	900			900
ENGINE OIL	9150	00-189-6729	TEXACO			900		DR	
LUBRICATING OIL, ENGINE	9150	00-189-6729	BATTENFIELD AMER.		MIL-L-2104				
LUBRICATING OIL, ENGINE	9150	00-189-6729	GOLDEN BEAR DIV. WITCO		MIL-L-				
STOR OIL SAE 30	9150	00-189-6729	SOUTH COAST TERMINALS		MIL-L-2104E	900			900
LUBRICATING OIL	9150	00-191-2772	WOLF'S HEAD OIL REF. CO		MIL-L-2104				
LUBRICATING OIL	9150	00-223-4116	ROYAL LUBRICANTS		MIL-L-6006	900			900
RAKE FLUID, AUTOMOTIVE	9150	00-231-9071	DOW CHEM CORP.		VV-B-600				
RAKE FLUID	9150	00-231-9071	OLIN CORP.		VV-B-600	900		9 GL	#4
RAKE FLUID	9150	00-231-9071	CSD		VV-B-600	900			900
ETROLATUM, TECH.	9150	00-250-0926	UNI-KEM INT. CORP.		VV-P-236			CN	
ETROLATUM, TECHNICAL	9150	00-250-0933	UNI-KEM INT. CORP.		VV-P-236A CL2 TY2	910			40
ENETRATING OIL	9150	00-261-7099	OCTAGON PROCESS		VV-P-216				
HYDRAULIC FLUID, PET.BASE	9150	00-261-8317	CASTROL INC., BRAY PROD.		MIL-F-17111	900		25 GL.	#1
YD. FLUID, PET BASE	9150	00-261-8317	ROYAL LUBRICANTS CO. INC.		MIL-F-				
YD. FLUID, PET BASE	9150	00-261-8317	PENRECO DIV OF PENNZOIL		MIL-F-				
HYDRAULIC FLUID	9150	00-261-8310	TECHNOLUBE PRODUCTS		MIL-F-17111	900			900
V-L-800	9150	00-273-2309	ASHLAND PETROLEUM CO.		VV-L-800	600		7 BTL	600
VACUUM PUMP OIL	9150	00-273-8663	SARGENT-WELCH SCIENTIFIC		MIL-L-83767	900		1 QT	#4
LUBRICATING OIL, VAC. PUMP	9150	00-273-8663	DAVIS-HOWLAND OIL		MIL-L-83767 TII	600/800		1CN/10BT	600/81
VACUUM PUMP OIL	9150	00-273-8663	CONVOY OIL CO		MIL-L-83767	600		2 QT	600
VACUUM PUMP OIL	9150	00-273-8663	KINNEY VACUUM CO.		MIL-L-83767				
YD FLUID, PET BASE	9150	00-290-4091	PENRECO (DIV OF PENZOIL)		MIL-F-17111				
LUBRICATING OIL, GEN PURP	9150	00-450-0075	BULK CHEMICAL DIST. INC.		VV-L-800	900		4 CN	#4
V-L-800	9150	00-450-0075	AMERICAN WRITING INK CO.		VV-L-800	ERL		3CN	ERL
EMERAL LUBE OIL	9150	00-450-0075	OMNITECH INTERNATIONAL		VV-L-800	900			900
GREASE, AUTO & ARTILLERY	9150	00-530-7369	SULFLO INC.		MIL-G-10924				
GREASE, AUTO & ARTILLERY	9150	00-530-7369	BATTENFIELD GREASE & OIL		MIL-G-10924				
LUBRICATING OIL, GEN. PURP	9150	00-542-1430	OCTAGON PROCESS		MTI-L-7A70				

NAME	QTY	FSC	NIIN	MANUFACTUR	CITY/STATE	MIL_SPEC	WORKCENTER	ANNUAL_USE	QUANTITY	LOCAT
LUBRICATING OIL, GEN. PURP	9150	00-542-1430	AMERICAN WRITING INK CO.			MIL-L-7878	900		8 PT	#4
HYDRAULIC FLUID A/T	9150	00-657-4959	CROWN OIL & CHEMICAL CO.			ATF DEXRON II				
HYDRAULIC FLUID TRANSMISS	9150	00-698-2382	BORNE CHEMICAL CO.			DEXRON II	900			900
HYDRAULIC FLUID, A/T	9150	00-698-2382	DELTA PETROLEUM							
HYDRAULIC FLUID	9150	00-698-2382	CHEVRON CHEMICAL CO.							
HYD. FLUID, DEXRON II	9150	00-698-2382	EXXON CO. USA				900		CN	# 4
CORROSION PREVENTITIVE	9150	00-698-2382	SUN REFINING & MARKETING			MIL-C-6529	900			900
GREASE, MOLYBDENUM	9150	00-754-2595	GENERAL MOTORS CORP.			MIL-G-21164	900		CN	
LUBE COMPOD./DIMETHY. SIL	9150	00-823-7860	ROYAL LUBRICANTS CO.				600			600
SILICONE 7	9150	00-823-7860	CSA LIMITED, INC.				800		6 CN	81A
302 TRANSMISSION FLUID	9150	00-843-1636	CROWN INDUSTRIES							
TRANSMISSION FLD. TYPE F	9150	00-843-1636	GULF OIL PRODUCTS CO.			ESW-M2C33-F (FORD)				
TRIBOLUBE-16 TY I,II,III	9150	00-961-8995	SUN REFINING & MARK. CO.			MIL-L-G-27617				
TRIBOLUBE 10C TYPE III	9150	00-961-8995	AEROSPACE LUBRICANTS			MIL-L-G-27617	800		12 TU	81A
HIGH VOLUME GREASE	9150	00-965-2400	AEROSPACE LUBRICANTS				900			900
AIRCRAFT LUBE OIL	9150	00-985-7099	NONFLUID OIL CORP			MIL-L-23699C	900			900
LUBRICATING OIL, ENGINE	9150	00-985-7099	HEXAGON ENTERPRISES			MIL-L-23699				
LUBRICATING OIL, ENG. A/C	9150	00-985-7099	ROYAL LUBRICANTS CO.			MIL-L-23699	900		24 QT	#4
LUBRICATING OIL, A/C ENG	9150	00-985-7099	HATCO CHEMICAL CO.			MIL-L-23699				
GREASE, AIRCRAFT, INSTRUM	9150	00-985-7246	EMERY CHEM. DIVISION			MIL-G-23827	690			690
GREASE, A/C & INSTRUMENT	9150	00-985-7246	ROYAL LUBRICANTS			MIL-G-23827	900		5 GL	#1
HYD. FLUID, (HYD, DISP)	9150	01-009-7709	BATTENFELD GREASE & OIL			MIL-H-83202B	900		10 GL	#1
HYD FLUID, FIRE RESISTANT	9150	01-009-7709	AMERICAN OIL & SUPPLY CO.			MIL-H-83202				
HYDRAULIC FLUID, FIRE RES	9150	01-009-7709	ROYAL LUBRICANTS CO.			MIL-H-83202	900			
LUBRICATING OIL	9150	01-035-5394	CASTROL INC.			MIL-L-2105				
ENGINE OIL, GEAR	9150	01-035-5394	BATTENFELD GREASE & OIL			MIL-L-2105				
ENGINE LUBRICANT, PRES	9150	01-054-6453	EXXON COMPANY U.S.A.			MIL-G-21164D	800/900		6BT/4BT	800/#4
BREAK FREE	9150	01-054-6453	ROYAL LUBRICANTS CO. INC.				900			900
CLEANER, LUBRICANT & PRES	9150	01-102-1473	BREAK FREE			MIL-L-63460				
HYDRAULIC FLUID, FIRE RES	9150	01-119-8149	BREAK-FREE CORP.			MIL-H-41670B	900		55 GL	HGR DC
IT, HELMET POURING PT C	9330	00-206-9275	HULS AMERICA INC.				800		1 KT	800
IT, HELMET POURING PT B	9330	00-206-9275	MESA CHEM. CORP.				800		1 KT	800
IT, HELMET POURING PT A	9330	00-206-9275	MESA CHEM. CORP.				800		1 KT	800
ELMET POURING KIT	9330	00-206-9275	MESA CHEM. CORP.				800		1 KIT	810
GRAPHITE DRY LUBE	9620	00-233-6712	MESA CHEMICAL CORP.			SS-G-659	900			900
			ASBURY GRAPHITE MILLS							

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TITLE: AIMD CORPUS CHRISTI FIRE PROTECTION AND FIRE PREVENTION PLAN			DIRECTIVE No. BO-LSI-03
ISSUE DATE 29 NOV 89	REVISED 16 May 92	APPROVED BY Dan R. Sawyer <i>[Signature]</i>	PAGE 1 OF 4
REFERENCES: (a) B.O. SAFETY MANUAL SEC. 100.0500 (b) NAS CORPUS CHRISTI INSTRUCTION 11320.8H			

ENCLOSURE (1) FIRE EXTINGUISHER AND MUSTER AREA  
LOCATIONS

A. Cancellation: BO-LSI-03 Revised 29 Jan 1992

B. Policy The adoption of sound fire prevention regulations is the first step toward the achievement of adequate protection. All regulations shall be rigidly enforced by all workcenter leadmen and all employees.

C. Guidelines Burnside-Ott will be guided by all standard publications and NAS Corpus Christi Instruction 11320.8H pertaining to fire prevention matters. It is essential all Burnside-Ott employees exercise constant vigilance to prevent fires and to guard against the creation of fire hazards. Any person who knows of a fire hazard or finds evidence of an extinguished fire shall report it to the NAS Fire Department.

1. Fire Station and Business Telephones

Fire Station, Bldg. 1742, NAS Corpus Christi  
 Fire Chief/Ass't Fire Chief - 3491  
 Fire Protection Inspectors - 3491  
 Fire Station Dispatcher - 3491

2. Transmission of Fire Alarm

(A). Upon the discovery of fire, regardless of its size, location or probable consequences, the person discovering the fire shall turn in the alarm from the nearest fire telephone box or by commercial telephone. If in a structure, he/she shall also activate the Building Fire Evacuation Alarm (where installed) or verbally spread the alarm in the area.

3. How to Report a Fire Alarm

- (a) By means of the nearest fire telephone box.
- (b) By activation of Building Fire Evacuation Alarm System on some buildings.
- (c) By telephone: Station Phones . . . Dial 3333

<b>Immediate Spill Response Emergency Action Plan</b>			
<b>Hangers 55, 56, 57: Beech Aerospace Support Services</b>			
<b>WARNING:</b> Designated personnel at this facility have been specifically tasked, trained, and equipped to respond to oil and hazardous substance spills. Unauthorized individuals shall never undertake the response or investigation to any actual or suspected oil or hazardous substance spills			
<b>I. IMMEDIATELY REPORT</b> spills by the most expeditious means (e.g., voice, telephone) to your supervisor, or contact the <b>FACILITY EMERGENCY COORDINATOR</b> as listed below:			
<b>Facility Emergency Coordinator</b>	<b>Shop</b>	<b>Title</b>	<b>Phone Ext.</b>
Ron Jacobs	BASS	Safety Coordinator	4522
<b>IF CONTACT CANNOT BE MADE WITH THE FACILITY EMERGENCY COORDINATOR, REPORT SPILLS IMMEDIATELY to:</b>  <b>FIRE DEPARTMENT EXT. 3333</b>  Number of Persons Working at this site: 50			
<b>II. FIRE SAFETY PLAN</b>			
<b>A. Equipment</b>			
The hangar and workshop areas are equipped with an automatic sprinkler system and CO <sub>2</sub> , halon, and dry chemical fire extinguishers. The office and shop areas are equipped with an automatic sprinkler system. Fire extinguishers are throughout the facility, specifically near each shop area and building exit. Fire alarms are in the same vicinity. Emergency response is initiated by fire alarm or from telephones in the shop/office areas.			

<b>Immediate Spill Response Emergency Action Plan</b>	
<b>Hangers 55, 56, 57: Beech Aerospace Support Services</b>	
<b>B.</b>	<b>Building Construction/Activity Description</b>
<p>Beech Aerospace Support Services (BASS) is in Hangars 55, 56, and 57. The hangars are of identical construction with cinder block walls and metal roof decks.</p> <p>Office and shop areas within each hangar are configured differently to accommodate the operations housed within that hangar. The management office for the activity is located in Hangar 57, general corrosion control activities located in Hangar 56, and aircraft stripping and painting operations (paint spray booth and stripping area) located in Hangar 55. See Figures 17-2 through 17-4 for building layouts and locations of hazardous material and waste storage areas.</p> <p>BASS is also responsible for maintaining two buildings, each of which provide segregated areas for hazardous materials/hazardous waste storage. One building is approximately 50 yards east of Hangar 57, is properly bermed and secured, and is primarily used to store hazardous materials. The other storage building is approximately 50 yards east of Hangar 56 and is formerly used for temporary storage of hazardous wastes associated with the activities in Hangars 55 and 56 (corrosion control).</p> <p>The hazardous materials coordinator and assistant have completed 40-hour hazardous waste site worker training and eight other employees have completed 8-hour hazardous material technician training.</p>	
<b>III. SITE HAZARDOUS SUBSTANCE INFORMATION</b>	
<b>A.</b>	<b>Inventory</b>
<p>The activities performed by BASS that use hazardous materials are specifically related to the maintenance of King Air 44 and T-34 Mantor Aircraft. The primary activities involve the use of corrosives, solvents, and paints in the maintenance of aircraft structures and the use of solvents, lubricants, and fuels in the maintenance of aircraft engines. BASS stores flammable liquids such as paints and solvents in flammable storage lockers throughout the respective hangars. Refer to the Site Plans for locations of the flammable/hazardous material storage lockers, waste solvent, motor oil, paint barrels stored on pallets inside of the respective hangars, and the temporary hazardous waste storage area (outside Hangar 57) and hazardous materials storage area (outside Hangar 56). Typical categories of materials used and stored by BASS include batteries, paints, flammable solvents, chlorinated solvents, and motor lubricants and fuels.</p> <p>Table ANNEX 1 - 6.0, Typical Site Inventory: BASS, Hangars 55, 56, 57.</p>	

## Immediate Spill Response Emergency Action Plan

### Hangers 55, 56, 57: Beech Aerospace Support Services

#### B. Probable Spill Route

The following spill scenarios were identified as most likely at the BASS areas where hazardous materials/wastes are handled and stored:

##### Spill of Hazardous Substance at Temporary Hazardous Waste Storage Area (Hangar 56):

The specific materials stored in this area are clearly identified by appropriate labeling and, other than spent batteries, most are stored in 55-gallon drums. The maximum spill potential for this site is approximately 55 gallons albeit fire/explosion or introduction of water or fire extinguishing media. While the area is effectively contained by a berm the most likely path of migration is south and east onto the grassy area apron between Hangar 51 and Building T-22.

##### Spill of Hazardous Substance in Hangar Area

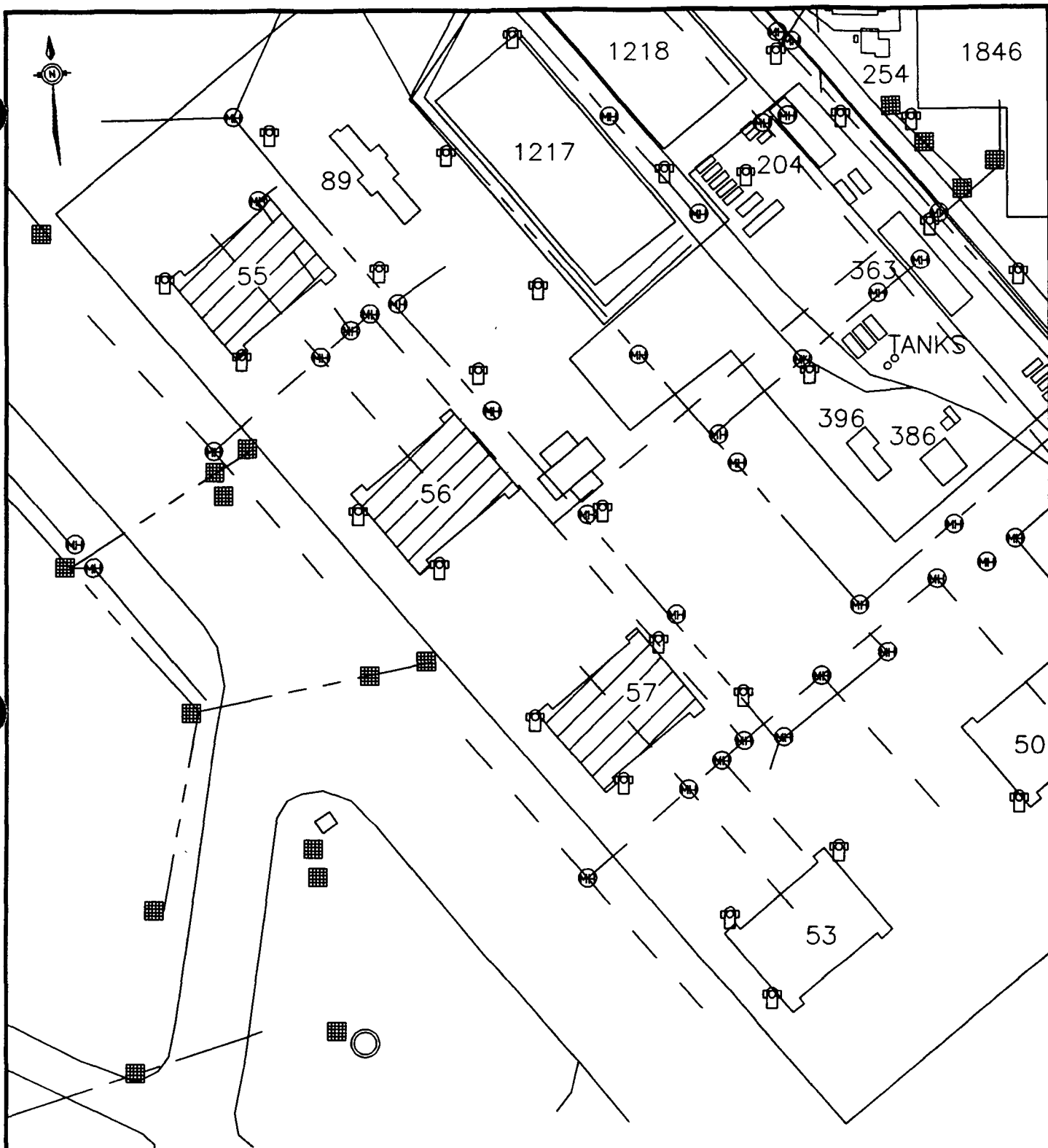
The specific materials used in this area include aircraft fuel, motor fuel, lubricants, lead-acid and NiCd batteries, and various solvents and paints. The solvents and paints used in this area are stored in the flammable storage lockers in the hangar or in the hazardous waste temporary storage area (Building T-22). The materials are either aerosols or are transferred to approved dispensers for use in the hangar area. The maximum spill potential within the hangar area is from aircraft fuel and solvents (5 gal.). A spill in the hangar area will drain to the south toward the airfield apron and a floor drain that extends along the hangar perimeter.

#### C. Spill Response Equipment and Materials

A 55-gallon spill kit is at the Hazardous Waste Storage Locker and in Hangar 57.

Last updated: November 1994

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LEGEND

-  - FIRE HYDRANT
-  - MANHOLE
-  - STORM DRAIN

300 0 300  
SCALE FEET



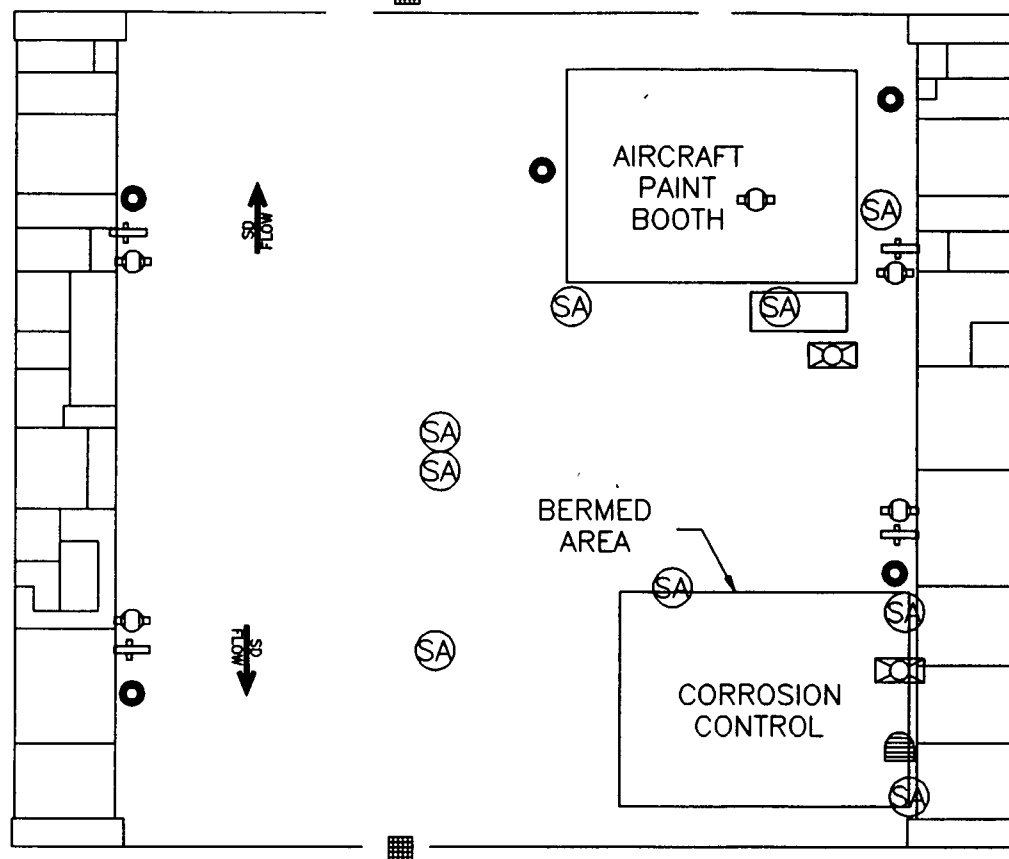
NAS CORPUS CHRISTI  
OHS CONTINGENCY PLAN

BEECH AEROSPACE  
VICINITY PLAN









DWG DATE: 01/14/97

DWG NAME: 91CP07

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# LEGEND

-  - FIRE ALARM
-  - EMERGENCY EYEWASH AND SHOWER
-  - SUMP
-  - SPRINKLER
-  - STAND PIPE
-  - SATELLITE ACCUMULATION AREA
-  - FLAMMABLE LOCKER
-  - SURFACE DRAINAGE

50 0 50  
SCALE FEET

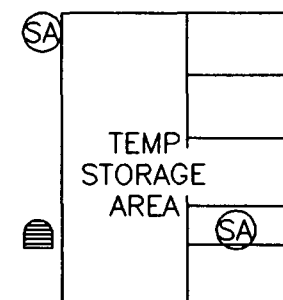
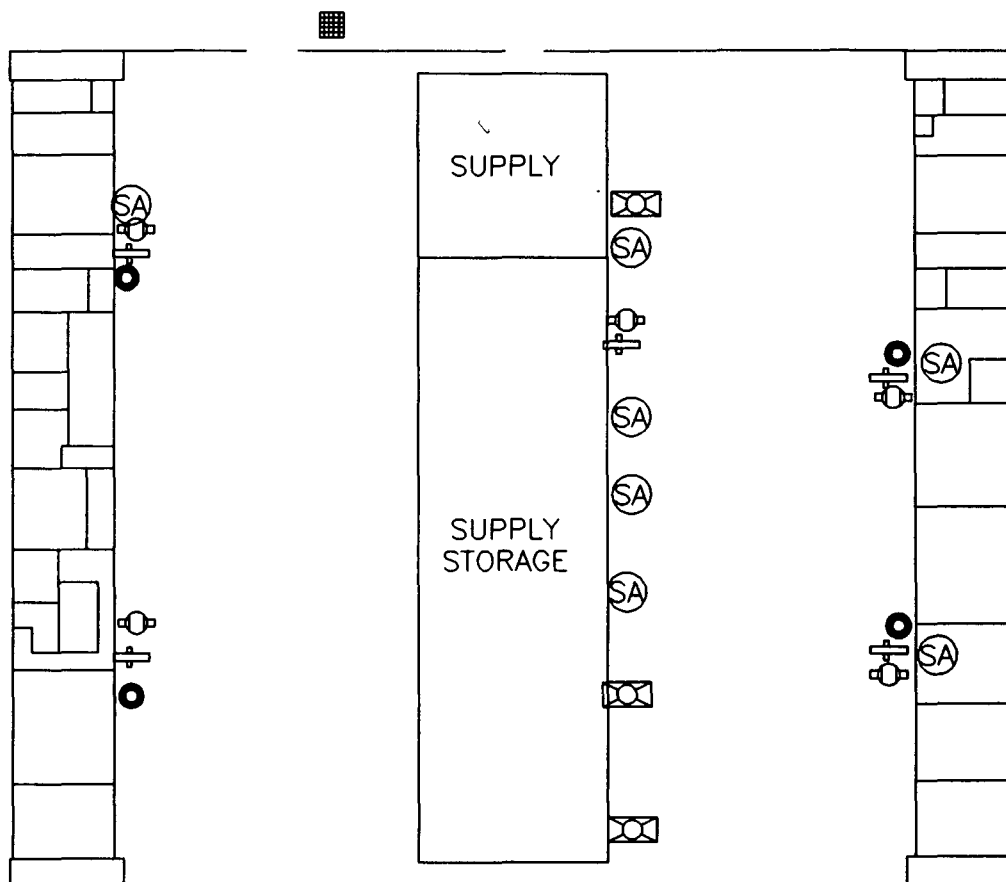


NAS CORPUS CHRISTI  
OHS CONTINGENCY PLAN

BEECH AEROSPACE  
HANGAR 55  
FLOOR PLAN

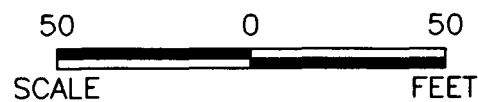
DWG DATE: 01/14/97 | DWG NAME: 91CP08

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LEGEND

- - FIRE ALARM
- ⦿ - EMERGENCY EYEWASH AND SHOWER
- - SUMP
- ⊕ - SPRINKLER
- + - STAND PIPE
- ⊙SA - SATELLITE ACCUMULATION AREA
- ⊠ - FLAMMABLE LOCKER



NAS CORPUS CHRISTI  
OHS CONTINGENCY PLAN

HANGAR 56  
FLOOR PLAN

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A horizontal scale bar with markings at 50, 0, and 50. The word "SCALE" is at the left end and "FEET" is at the right end.



NAS CORPUS CHRISTI  
OHS CONTINGENCY PLAN

BEECH AEROSPACE  
HANGAR 57  
FLOOR PLAN

DWG DATE:01/14/97	DWG NAME:91CP10
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**List ANNEX 1 - 6.0**  
**Typical Site Inventory: Beech Aerospace**  
**(Hangars 55, 56, 57)**

Last updated: November 1994

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Beech Aerospace Support Services  
Naval Air Station Corpus Christi  
Contract No. N68520-90-D-0057  
Hazardous Material Report (Short)

Partnumber	Nomenclature	Nsn	Qoh
00-061-8303	EPOXY PATCH CLEAR	8040-00-061-8303	0
00-118-2695	911-ADHESIVE	8040-00-118-2695	0
00-181-7761	911-ADHESIVE	8040-00-181-7761	0
00-181-7933	911-ANTIFREEZE	6850-00-181-7933	0
00-181-8079	911-THINNER, ALIPHAT	8010-00-181-8079	25
00-181-8276	911-PAINT	8010-00-181-8276	0
00-181-8277	911-PAINT GLOSS BLK	8010-00-181-8277	6
00-181-8281	911-POLYURETHANE COA	8010-00-181-8281	11
00-181-8282	911-POLYURETHANE COA	8010-00-181-8282	12
00-181-8283	911-PAINT BLUE	8010-00-181-8283	0
00-181-8284	911-PAINT KT BLUE QT	8010-00-181-8284	2
00-181-8287	911-POLYURETHANE COA	8010-00-181-8287	6
00-181-8294	911-POLYURETHANE COA	8010-00-181-8294	0
00-181-8296	911-POLYURETHANE COA	8010-00-181-8296	9
00-186-6681	30 WEIGHT OIL-QT	9150-00-186-6681	0
00-189-6729	911-LUBRICATING OIL,	9150-00-189-6729	0
00-231-9071	911-BRAKE FLUID, AUT	9150-00-231-9071	5
00-238-8119	911-NAPHTHA, ALIPHATI	6810-00-238-8119	8
00-264-6535	911-BORIC ACID, ACS	6810-00-264-6535	2
00-264-6618	911-SODIUM BICARB.	6810-00-264-6618	0
00-281-2002	911-TOLUENE, TECHNIC	6810-00-281-2002	15
00-482-5670	911-POLYURETHANE COA	8010-00-482-5670	6
00-482-5671	911-PAINT	8010-00-482-5671	6
00-490-7651	911-LACQUER	8010-00-490-7651	1
00-551-7934	911-LACQUER	8010-00-551-7934	0
00-582-5382	911-PAINT, BLACK, FLAT	8010-00-582-5382	0
00-782-2740	911-INSPECTION PFNET	6850-00-782-2740	2
00-803-6444	911-SPRAY KIT, SELF P	4940-00-803-6444	4
00-823-7860	LUBRICATING COMPOUND	9150-00-823-7860	6
00-926-5280	ALL PURPOSE CLEANER	7930-00-926-5280	2
00-950-9766	911-GRAIN, ABRASIVE	5350-00-950-9766	8
00-985-7845	911-BATTERY, NONRECH	6135-01-382-9208	8
002701	LPS PRECISION CLEANR		8
01-007-5494	FLUX, SOLDERING	3439-01-007-5494	0
01-041-1596	911-AMLGUARD	8030-01-041-1596	48
01-329-6301	911-POLYURETHANE COA	8010-01-329-6301	12
01110764	ADDITIVE, H2O TRTMNT		0
03528	DEGREASER, ZERO-TRI		0
04128	CONTACT CLEANER		0
05950	RUBBING COMPOUND		2
10-P2-12	EPOXY PRIMER KT=GL		0
101-380016-1	OIL		2
101207	SOLDERING FLUX, PASTE		0
1201	ALODINE		0
1300	911-ADHESIVE, BRANNE	8040-00-148-7182	30
13083-5	911-CARTRIDGE, AIRCR	1377-00-930-9390	17

Partnumber	Nomenclature	Nsn	Qoh
130AA	LUBRIPLATE		
1402	HIGH HEAT ALUMINUM		
1501	PAINT, GLOSSY WHITE		79
15045	911-ENAMEL, BLUE	8010-00-598-5940	0
1505	HIGH HEAT WHITE		11
1567C	PAINT STRIPPER		0
1601	PAINT, GLOSSY BLACK		33
1602	PAINT, FLAT BLACK		26
1608	PAINT, GRAY		48
1614	HIGH HEAT, BLK PAINT		10
1901	REGAL BLUE KRYLON		24
1986S	SOAP CN=5GL		0
202001	TOULENE, TECHNICAL		0
2101	PAINT, CHERRY RED		52
232389	BODY FILLER, SNOWITE		4
2380	OIL		334
24-F-40	BATTERY		6
24-F8-10	WHITE PAINT KT=GL		0
24-F8-204	BLUE PAINT KT=GL		0
24-F8-301	RED PAINT KT=GL		0
24-F8-400	YELLOW PAINT KT=GL		0
24-F8-600	ORANGE PAINT KT=GL		0
24-F8-90	G BLACK PAINT KT=GL		0
250	THERMAL JOINT COMPD		5
26-F8-90	F BLACK PAINT KT=GL		0
264	BONDO, LIGHTWEIGHT		
295857	RUBBER COATING, DIP		
29B	BINDER CEMENT		0
29F	FILLER CEMENT		0
2PERMATEX	SEALER 11 OZ TUBE		5
2X727-A	ENAMEL, RED INSULATI		8
320-465	RUST REMOVER		3
3300	ADHESIVE (4OZ)		2
364-1-6	WASH PRIMER KT=GL		0
403D	PLASTIC CLEANER		10
40576-01	BATTERY, NICAD(SAFT)		2
409-0250	TRUE BLUE GLASS CLNR		1
412-0116	LAVA HAND SOAP		0
416-0151	PINE OIL, DISENFECTN		0
43B030RB13	NICAD BATTERY		0
50659-0101	ELT BATTERY		6
509323	ASPIRIN=100 COUNT		0
5224	FIBERGLASS KIT		15
55MMILG4343	GREASE		22
60-40	SOLDER		0
601	SOAP, TENNANT		0
636	OIL GR MOBIL		2
660-ES	CLEANER		0
72468	INSECT REPELLANT		28
73002G	ALODINE 1200		0
73014	ACCELERATOR		24

Part Number	Nomenclature	Nsn	Qoh
3015	ACCELERATOR		40
74-451-20	CEMENT		0
74-451-20 1/2 PT	CEMENT		3
74-451C	REPAIR KIT, RUBBER		0
751	911-ANTI-FOG FOR GOG	0NAS SAFETY DEPT	2
765-1281	FIBERGLASS KIT		0
76764	911-ANTISEIZE COMPOU	8030-00-251-3980	14
77-048-00	BATTERY		7
83285	MARVEL MYSTERY OIL		0
861-006	FIRE BOTTLE		2
88973	REPELLENT, CUTTERS		0
92-017	CEMENT 4OZ CAN		1
9V	911-BATTERY, NONRECHA	6135-00-900-2139	3
A-A-1452	911-LACQUER	8010-00-290-6158	0
A56B	CEMENT COATING		0
AA20	911-LUBE, TIRE	2640-00-256-5527	0
AEROSHELL 22	GREASE		69
AEROSHELL 5	GREASE		185
AEROSHELL 6	GREASE (35 LB. CN)		2
AEROSHELL 7	GREASE		215
AEROSHELLGR17	GREASE 35LB		2
ALCOHOL	ISOPROPAL		55
ALODINE 1203	911-CORROSION RESIST	8030-01-043-7644	0
ALODINE-1203	911-CORROSION RESIST	8030-01-043-7644	0
ALODINE1200	911-CORROSION RESIST	8030-00-823-8039	2
LUNIPREP33	CLEANER, CORR		4
AMOCO GREASE	911-MOLYBDENUM GRS.	9150-01-015-1542	0
ARKLONE P	CLEANING COMPOUND		0
ARMORALL32OZ	911-PRESERVE, INDUST	8030-01-087-3589	3
ATF FORD	TRANSMISSION FLUID		27
B274P-AS103	RAIN EROSION KT=GL		0
B43553-IIBLKPT	911-INK, MARKING	7510-01-036-3724	0
BA1568	911-BATTERY, NONRECHA	6135-00-838-0706	73
BA1574	911-BATTERY, NONRECHA	6135-00-073-8939	30
BA42	911-BATTERY, NONRECHA	6135-00-985-7846	7
BB-N-411	911-NITROGEN, TECHNIC	6830-00-244-2741	0
BLUE	TORQUE PAINT		0
BS272WVWVC	FIBERGLASS 1 INCH		35
CAPELLAE	OIL TEXACO COMP		3
CE1155	CIRCUIT COATING UR		0
CPS890B1-2	SEMKIT		0
DC4	911-GREASE	6850-00-177-5094	0
DC7	COMPOUND		1
DEVCONF	911-SEALING COMPOUND	8030-00-051-4011	11
DOD-G-24508A	911-MA-1 GREASE(MIL-	9150-01-117-2928	0
DRISLIDE00215	DRY LUBRICANT		4
EA9309	ADHESIVE, 1 GAL KI		0
EA9309-25GR	CORHYSOL		0
EA960F	ADHESIVE		1
EC-612	SEALER 1-1/2 LB		0
FC1202	SEALER		8

Partnumber	Nomenclature	Nan	Qoh
EC1239A1-2	ADHESIVE		49
EC1360L	CEMENT		0
EC1702	CEMENT		1
EC2216A/B 20Z	911-ADHESIVE	8040-00-145-0530	1
EC5034	911-ADHESIVE	8040-01-311-5631	1
EC801CLA1-2	SEALER		5
EC847	CEMENT		1
ED-366	911-AIRCRAFT SOAP	6850-01-045-7931	0
ENCO2380-55	OIL,PT6,DRUM		1
FC-44	911-INSPECTION PENET	6850-00-142-8840	8
FM1553-ES	CARPET,SUPERKLEEN		0
FR2 3-4	FIRE EXT & BRACKET		3
FREON TF	911-CLEANING COMPOUN	8650-00-033-8851	0
FREON12	911-DICHLORODIFLOURO	6830-00-106-1656	10
G2001	PAINT,BLACK		4
G2002-01	PAINT, BLACK		0
G3010-01	CATALYST		8
G322L	911-LUBRICANT, SILIC	9150-00-529-7471	1
G5002	BLUE PAINT		4
G7001-01	PAINT,INSIGNA RED		0
G7029-01	PAINT, ORANGE		0
G8022	ALUMIGRIP WHITE		6
G8022-01	PAINT, WHITE		0
G9034-04	ALUMIGRIP		6
GREEN	TORQUE SEAL PAINT		0
ICEX	SILICONE COMPOUND		0
ICEX-II	SILICONE		0
IM-108	ACCELERATOR		0
IM-112	ANTI-CRATERING		0
JA-8380	ACID SPILL KIT		0
JP5	FUEL		0
KR70KIT	SCRATCH REMOVER		3
L-S-300Y	911-TAPE,REFLECTIVE	9390-00-949-7588	2
LL-L00-0472	911-CLEANING COMPOUN	7930-LL-L00-0472	9
LOCTITE242	BOND CEMENT 50CC		2
LOCTITE271	911-SEALING COMPOUND		2
LOCTITE277	BOND CEMENT 50CC		6
LOCTITE601	COMP, RETAINING		6
LOCTITE60921	COMP RETAINING		4
LPS	CONTACT CLEANER CN.		0
LPS1	LUBRICANT 110Z CAN		51
LPS2	LUB 110Z CAN		43
LPS3	CORROSION PREVENTAT		78
LPSINSTANTSUPER	DEGREASE		73
LPSSUPERCLEANER	DEGREASER		0
M1017	CRATER X		0
M77	GREASE		8
M83769-4-1	BATTERY		0
MAGKLEEN 4	CLEANING SOLVENT		1
MIL-C-16173	CORR. PREVENTIVE COM		2
MIL-C-43616C	CLEANING COMPOUND	6850-00-005-3305	9

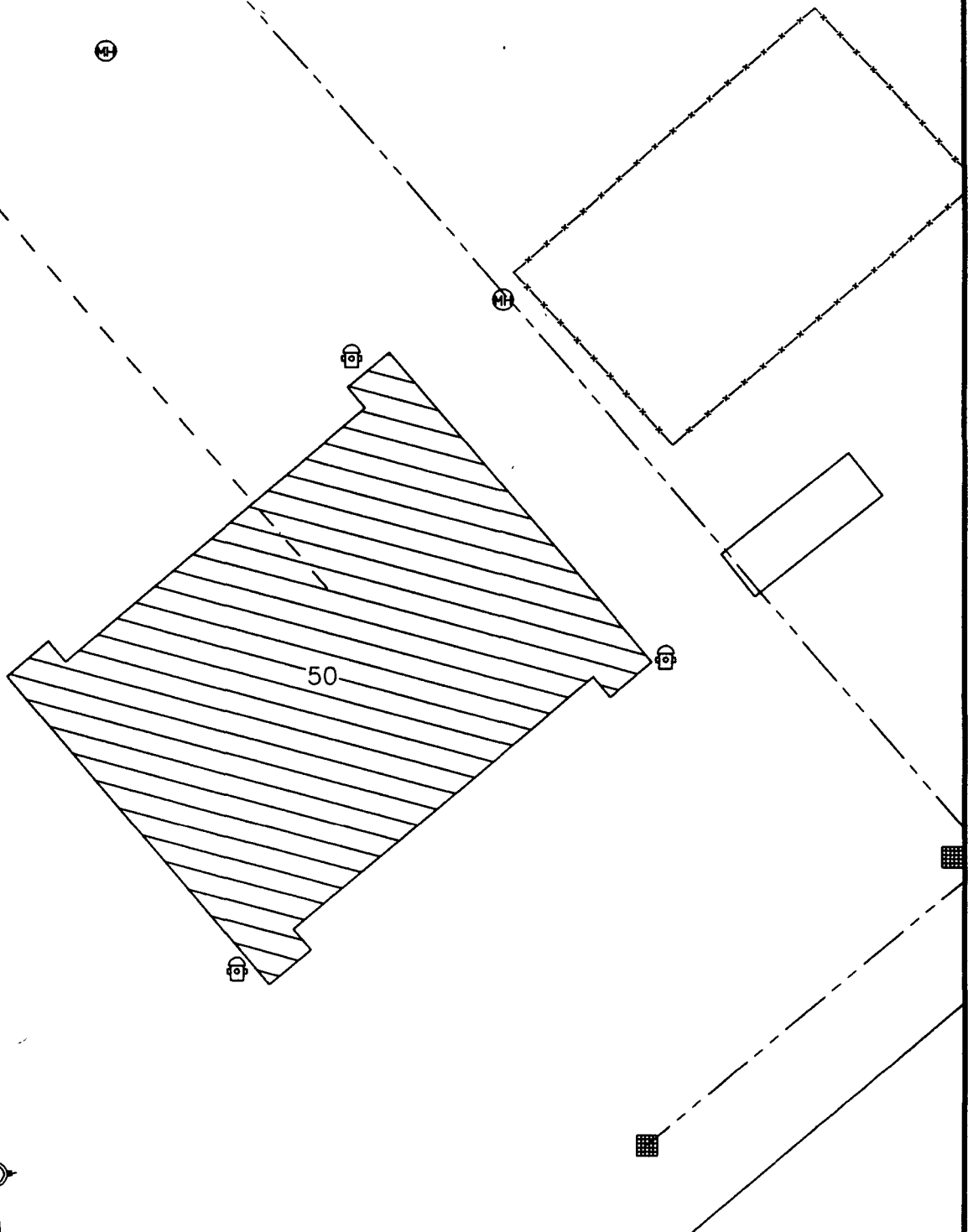
Partnumber	Nomenclature	Nsn	Qoh
MIL-C-81309	911-CORROSION PREVEN	8030-00-546-8637	0
MIL-C-83286	911-POLYURETHANE	8010-00-181-8287	0
MIL-C-85285	911-POLYURETHANE COA	8010-01-293-6182	7
MIL-C-85570TYPEII	911-CLEANING COMPOUN	6850-01-236-0128	16
MIL-C-85570TYPEIII	911-SOAP, CN=5 GALLO	6850-01-232-9164	4
MIL-D-81298	911-DYE, LEAK DETECT	6820-00-926-8887	10
MIL-E-19933	911-ELECTRODE, WELDIN	3439-00-412-5236	0
MIL-G-10924D	GREASE	9150-00-190-0905	4
MIL-L-19538	911-LACQUER	8010-00-527-2884	2
MIL-L-2105	911-OIL, 90 WT. 5 G	9150-01-035-5393	0
MIL-R-81294	911-REMOVER, PAINT	8010-00-926-1489	0
MIL-S-8802A1/2QT	CEMENT		2
MIL-T-81772	911-THINNER, PAINT PR	8010-00-181-8080	0
MILA18455	911-ARGON, TECHNICAL	6830-00-169-0779	0
MILA5540B	911-ADHESIVE	8040-00-273-8717	3
MILC10578	911-CORROSION REMOVI	6850-00-174-9672	2
MILC16173D#2	911-CORROSION PREVEN	8030-00-231-2345	3
MILC5020A	COMPASS FLUID		1
MILC81309	CORROSION COMPOUND	8030-00-213-3279	0
MILC85054	911-CORROSION, PREVE	8030-01-045-4780	7
MILC85704	911-CLEANING COMPOUN	6850-00-181-7597	1
MILH5606	911-HYDRAULIC FLUID,	9150-00-223-4134	21
MILL60326	911-LUBRICANT, FLOURO	9150-00-349-9290	0
MILL7870	911-LUBRICATING OIL,	9150-00-263-3490	13
MILP6888B	POLISH METAL		3
MILP8585	PRIMER(16 OZ)		22
MILS8660C	911-SILICONE COMPOUN	6850-00-880-7616	0
MILT19544	911-THINNER, PAINT PR	8010-00-160-5788	10
MILT19588	911-TOLUENE-METHYLIS	6810-00-286-2285	3
MILT5544	911-GRAFITE, 1LB CAN	8030-01-044-5034	1
MILW5044TYPE2	PAINT BLK NO NSKID		5
MMMA187BTYPE1	911-ADHESIVE	8040-00-753-4800	2
MN1300	911-BATTERY, NONRECHA	6135-00-835-7210	0
MOLYKOTETYPEEG	GREASE 10 LB CAN		1
MOLYKOTETYPEEZ	LUBRICANT		4
MOUSEMILK	LUBE		7
NAPTHA	NAPTHA, 5 GL.		0
NEVRDULL2LB	METAL POLISH, VNDN		1
O-N-350	911-NITRIC ACID, TECH	6810-00-222-9655	0
O-S-598	911-SODIUM HYDROXIDE	6810-00-270-8177	0
OAKITE6	LUBE, DEPT37		9
PD680	911-DRY CLEANING SOL	6850-00-285-8011	2
PEN-100W	MARKER, PAINT		6
PINK	TORQUE SEAL		0
PR1201	POTTING COMPOUND		1
PR1221A 1-2	CEMENT		3
PS411	SKIN PROTECTIVE COMP	6850-00-244-4893	2
PWC201	POLYURETHANE PRIMER		0
PWC211	POLYURETHANE BLACK		2
PWC212	POLYURETHANE WHITE		4
11-100	FREON11/100LB CAN		1

Partnumber	Nomenclature	Nsn	Qoh
RED	TORQUE SEAL		6
RTV-123	SEALANT		
RTV102	911-ADHESIVE	8040-00-225-4548	0
RTV106	ADHESIVE		9
RTV108	911-ADHESV. 5 OZ TU	5960-00-843-0802	0
RTV102	911-ADHESIVE	8040-00-938-1535	7
RTV3145	ADHESIVE, CLEAR		0
RTV732	ADHESIVE, CLEAR		64
S3001-01	PRIMER (CONVERTER)		8
S9001-01	CATALYST		5
SHINEMASTER/PT	DEICE BOOT PREP PROD		9
SKCNF	CLEANER		1
SNOOP1GALCONT	LEAK DETECTOR		1
SPRAY N VAC	CARPET CLEANER		1
T0006	REDUCER		19
T0115	AWL PREP PLUS		0
T6776	PAINT STRIPPER		1
TINSOLDER	ROSIN CORE SOLDER	3439-00-269-9610	0
TORQUE SEAL PINK	TORQUE SEAL		0
TR-40	THINNER		0
TRACE	LEAK CHECK (REFRIG)		2
TTM261	911-METHYL ETHYL KET	6810-00-281-2785	33
TTT266	911-THINNER, PAINT PR	8010-00-160-5786	27
TURCO 5317	911-CLEANING COMPOUN	6850-01-045-7931	7
TURCO 6813	STRIPPER CN=5GL		0
VV-P-236	PETROLATUM, TECH	9150-00-250-0926	2
VVL800	911-LUBRICATING OIL,	9150-00-231-6689	
WB-3260-2	ACID SPILL REFILL		0
WHITE	PAINT, TORQUE		0
YELLOWORANGE	PAINT		0
Z493	ZEPHENIN CHLORIDE		0

<b>Immediate Spill Response Emergency Action Plan</b>			
<b>Hangar 50: U.S. Customs Service</b>			
<b>WARNING:</b> Designated personnel at this facility have been specifically tasked, trained, and equipped to respond to oil and hazardous substance spills. Unauthorized individuals shall never undertake the response or investigation to any actual or suspected oil or hazardous substance spills			
<b>I. IMMEDIATELY REPORT</b> spills by the most expeditious means (e.g., voice, telephone) to your supervisor, or contact the <b>FACILITY EMERGENCY COORDINATOR</b> as listed below:			
<b>Facility Emergency Coordinator</b>	<b>Shop</b>	<b>Title</b>	<b>Phone Ext.</b>
Jerry L. Beets Chuck Burns	USCS USCS	Hazardous Material Coordinator Hazardous Material Assistant	2198 7180
<b>IF CONTACT CANNOT BE MADE WITH THE FACILITY EMERGENCY COORDINATOR, REPORT SPILLS IMMEDIATELY to:</b>  <b>FIRE DEPARTMENT EXT. 3333</b>  Number of Persons Working at this site: 70			
<b>II. FIRE SAFETY PLAN</b>			
<b>A. Equipment</b>			
The hangar area is equipped with a AFFF system that is activated automatically or manually by hangar personnel. The offices are equipped with an automatic sprinkler system. Halon fire extinguishers are at approximately every other column and near each hangar exit. Fire alarms and AFFF are in the same vicinity. Emergency response is initiated by fire alarm or from a telephone in the Work Center 300 office.			
<b>B. Building Construction/Activity Description</b>			
U.S. Customs is housed in Hangar 50. The facility is of cinder block with metal roof deck construction. U.S. Customs is also responsible for maintaining a temporary hazardous waste storage area (Bldg. 50C) and a hazardous materials storage area, both of which are approximately 50 yards north of Hangar 50. Approximately 30 personnel work in Hangar 50, an undetermined amount of whom may be onsite at any one time. The mission of this facility is maintenance of P3 Aircraft, to maintain operational readiness. Operations performed onsite include corrosion control, engine maintenance, support equipment maintenance, and related activities.			

<b>Immediate Spill Response Emergency Action Plan</b>	
<b>Hangar 50: U.S. Customs Service</b>	
<b>III.</b>	<b>SITE HAZARDOUS SUBSTANCE INFORMATION</b>
<b>A.</b>	<b>Inventory</b>
<p>The activities performed by U.S. Customs that use hazardous materials are specifically related to the maintenance of aircraft. U.S. Customs has flammable storage lockers inside Hangar 50, five of which are along the south wall and store paints, paint strippers, and thinners, synthetic turbin oil, and hydraulic oil. Two barrels, one which holds chromic acid debris and one which holds aluminum coating debris, are in the northeast corner of the hangar. Typical categories of materials used and stored by U.S. Customs include, paints, flammable solvents, chlorinated solvents, and aircraft and motor lubricants and fuels are presented in List ANNEX 1 - 7.0 Typical Site Inventory: U.S. Custom Service.</p>	
<b>B.</b>	<b>Probable Spill Route</b>
<p>The following spill scenarios were identified as most likely at the US Customs Hangar 50:</p> <p><u>Spill of Hazardous Substance at Temporary Storage Area (Building 50C):</u>  The specific materials stored in this area are clearly identified by appropriate labeling and most are 55 gallon drums. The maximum spill potential for this site is approximately 55 gallons albeit fire/explosion or introduction of water or fire extinguishing media. While the area is effectively contained by a berm, the most likely path of migration is to a storm sewer approximately 20 yards south of the containment pad in a grassy area.</p> <p><u>Spill of Hazardous Substance in Hangar Area</u>  The specific materials used in this area include aircraft fuel, and various solvents and paints. The solvents and paints used in this area are stored in hazardous materials storage area (Building 50B). The materials are either aerosols or are transferred to approved dispensers for use in the hangar area. The maximum spill potential within the hangar area is from aircraft fuel (500 lbs) and solvents (5 gal.). A spill in the hangar area will drain to the west toward the airfield apron and a floor drain that extends along the hangar perimeter. This drain is connected to an oil/water separator and the sanitary/storm sewer system. The following spill scenarios were identified as most likely at Building 1552:</p>	
<b>C.</b>	<b>Spill Response Equipment and Materials</b>
<p>A 55-gallon spill kit is in the hangar area.</p>	

Last updated: ~~November 1994~~



LEGEND

-  - FIRE HYDRANT
-  - MANHOLE
-  - STORM DRAIN

90 0 90  
SCALE FEET

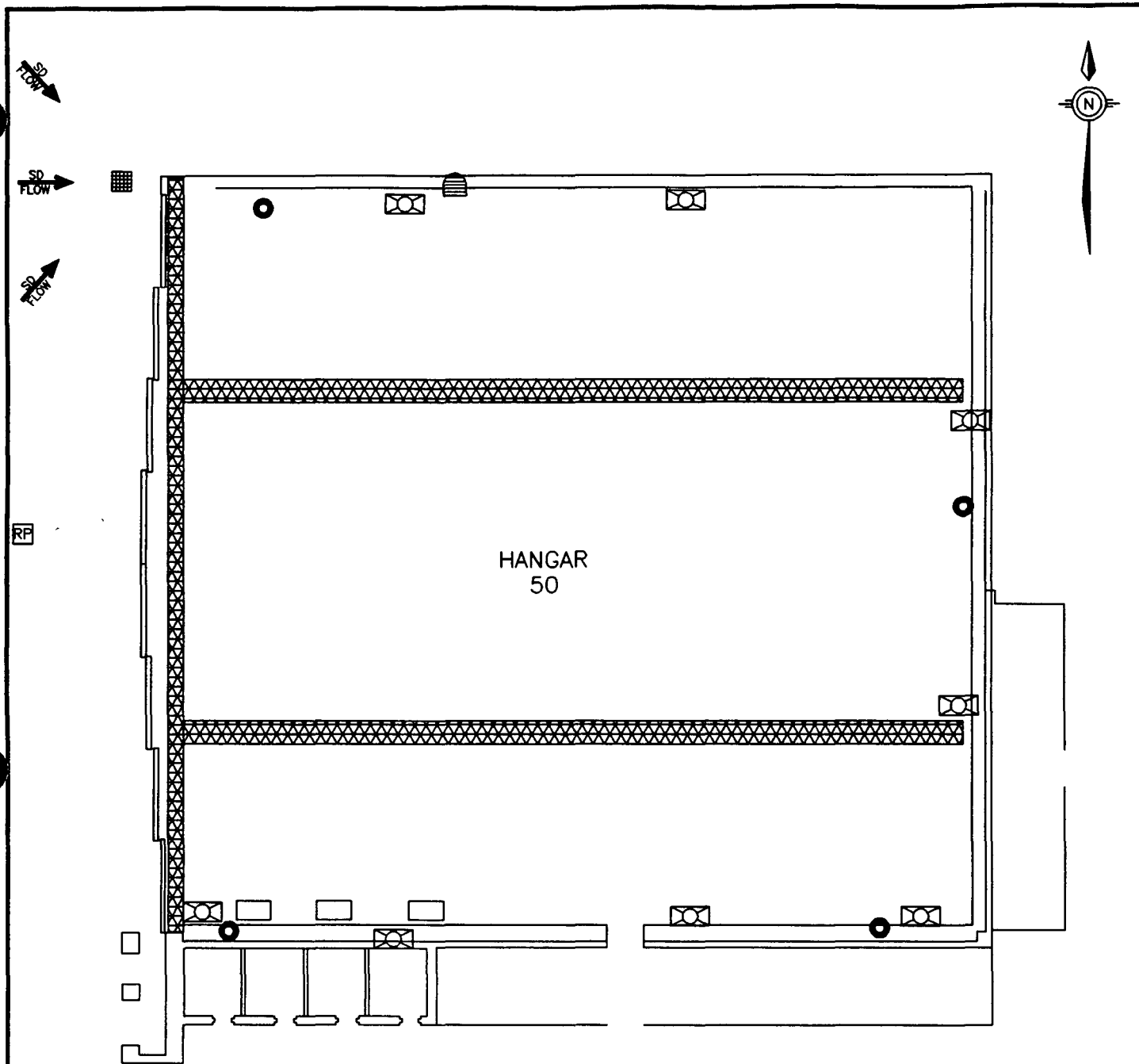


NAS CORPUS CHRISTI  
OHS CONTINGENCY PLAN

U.S. CUSTOMS  
HANGAR 50  
VICINITY PLAN

DWG DATE: 01/14/97 DWG NAME: 91CP11

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- LEGEND
- - FIRE ALARM
  - ⌈ - EMERGENCY EYEWASH AND SHOWER
  - - SUMP
  - ⊠ - FLAMMABLE LOCKER
  - RP - RALLY POINT
  - ▨ - DRAINAGE GRATE
  - SD FLOW → - SURFACE DRAINAGE FLOW

25                      0                      25  
SCALE                      FEET



NAS CORPUS CHRISTI  
OHS CONTINGENCY PLAN

U.S. CUSTOMS  
HANGAR 50  
FLOOR PLAN  
SITE PLAN

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**List ANNEX 1 - 7.0**  
**Typical Site Inventory: Hangar 50, U.S. Customs Service**  
Last updated: November 1994

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## HAZARDOUS MATERIAL INVENTORY

DATE	Gloss Black 8010-00-290-6984 pt spray 17038		Gloss White 8010-00-935-6609 pt spray 17875		Rain Erosion 8010-00-405-5030 qt kit		Corr Prev Comp 8030-00-540-8637 16oz spray		Corr Prev Comp 8030-00-041-1596 pint spray	
	+/-	TOTAL	+/-	TOTAL	+/-	TOTAL	+/-	TOTAL	+/-	TOTAL
1.		14		0		7		1		0
2.		14		0		7		1		0
3.		14		0		7		1		0
4.		14		0		7		1		0
5.		14	+11	11		7		1		0
6.		14		11		7		1		0
7.		14		11		7		1		0
8.		14		11		7		1		0
9.		14		11		7		1		0
10.		14		11		7		1		0
11.		14		11		7		1		0
12.		14		11		7		1		0
13.		14		11		7		1		0
14.		14		11		7		1		0
15.		14		11		7		1		0
16.		14		11		7		1		0
17.		14		11		7		1		0
18.		14		11		7		1		0
19.		14		11		7		1		0
20.		14		11		7		1		0
21.		14		11		7		1		0
22.		14		11		7		1		0
23.		14		11		7		1		0
24.		14		11		7		1		0
25.		14	-1	10		7		1		0
26.		14		10		7		1		0
27.		14		10		7		1		0
28.		14		10		7		1		0
29.		14		10		7		1		0
30.		14		10		7		1		0
31.		14		10		7		1		0

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00050EB6Z

HAZARDOUS MATERIAL INVENTORY

DATE	Lacquer White 8010-00-527-2493 gal 17875		Adhesieve 8040-00-515-2250 qt		Edge Sealer Comp 8030-00-195-7660 pt		Lacquer Clear 8010-00-515-2487 pint spray		Lacquer FlatBlk 8010-00-582-5382 <del>gal</del> 11136	
	+/-	TOTAL	+/-	TOTAL	+/-	TOTAL	+/-	TOTAL	+/-	TOTAL
1.		1		0		0		2		12
2.		1		0		0		2		12
3.		1		0		0		2	12	14
4.		1		0		0		2		14
5.		1		0		0		2		14
6.		1		0		0		2		14
7.		1		0		0		2		14
8.		1		0		0		2		14
9.		1		0		0		2		14
10.		1		0		0		2		14
11.		1		0		0		2		14
12.		1		0		0		2		14
13.		1		0		0		2		14
14.		1		0		0		2		14
15.		1		0		0		2		14
16.		1		0		0		2		14
17.		1		0		0		2		14
18.		1		0		0		2		14
19.		1		0		0		2		14
20.		1		0		0		2		14
21.		1		0		0		2		14
22.		1		0		0		2		14
23.		1		0		0		2		14
24.		1		0		0		2		14
25.		1		0		0		2		14
26.		1		0		0		2		14
27.		1		0		0		2		14
28.		1		0		0		2		14
29.		1		0		0		2		14
30.		1		0		0		2		14
31.		1		0		0		2		14

13

X

X

19

20

HAZARDOUS MATERIAL INVENTORY

DATE	GRAY 6810-01-265-9151 2 gal kit 36375		GRAY 8010-01-265-9145 qt kit 36375		White primerless 8010-01-354-0966 2 qt kit 17925		WHITE 8010-01-181-8282 2 2 qt kit 17925		Gray primerless 8010-01-345-0964 qt kit 36375	
	+/-	TOTAL	+/-	TOTAL	+/-	TOTAL	+/-	TOTAL	+/-	TOTAL
1.		2		1		7		7		3
2.		2		1		7		7		3
3.		2		1		7		7		3
4.		2		1		7		7		3
5.		2		1		7		7		3
6.		2		1		7		7		3
7.		2		1		7		7		3
8.		2		1		7		7		3
9.		2		1		7		7		3
10.		2		1		7		7		3
11.		2		1		7		7		3
12.		2		1		7		7		3
13.		2		1		7		7		3
14.		2		1		7		7		3
15.		2		1		7		7		3
16.		2		1		7		7		3
17.		2		1		7		7		3
18.		2		1		7		7		3
19.		2		1		7		7		3
20.		2		1		7		7		3
21.		2		1		7		7		3
22.		2		1		7		7		3
23.		2		1		7		7		3
24.		2		1		7		7		3
25.		2		1		7		7		3
26.		2		1		7		7		3
27.		2		1		7		7		3
28.		2		1		7		7	-1	2
29.		2		1		7		7		2
30.		2	+1/2	1 1/2		7		7		2
31.		2		1 1/2		7		7		2

~~2~~ 2

~~3~~ 3

~~4~~ 4

~~4A~~  
White

~~5~~ 5

~~6~~ 6

## HAZARDOUS MATERIAL INVENTORY

October 1994 Bulk Paint Storage Bldg 50

DATE	MEK 6810-00-281-2785 gal		NAPTHA 6810-00-238-8114 gal		REMOVE 713-690-8264 18oz		GRAY teflon 8010-01-330-7704 gal		GRAY 36375 8010-01-017-2480 gal	
	+/-	TOTAL	+/-	TOTAL	+/-	TOTAL	+/-	TOTAL	+/-	TOTAL
1.		26		44		0		2		2
2.		26		44		0		2		2
3.	-3	23		44		0	-2	0		2
4.	-4	19		44		0		0		2
5.		19		44		0		0		2
6.		19		44		0		0		2
7.		19		44		0		0		2
8.	-1	18		44		0		0		2
9.		18		44		0		0		2
10.		18		44		0		0		2
11.		18		44		0		0		2
12.		18		44		0		0		2
13.		18		44		0		0		2
14.		18		44		0		0		2
15.		18		44		0		0		2
16.	-1	17		44		0		0		2
17.		17		44		0		0		2
18.		17		44		0		0		2
19.		17		44		0		0		2
20.	-1	16		44		0		0		2
21.		16		44		0		0		2
22.		16		44		0		0		2
23.		16		44		0		0		2
24.		16		44		0		0		2
25.		16		44		0		0		2
26.		16		44		0		0		2
27.		16		44		0		0		2
28.		16		44		0		0		2
29.		16		44		0		0		2
30.	-1	15	-2	42		0		0		2
31.		15		42		0		0		2

X

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1

HAZARDOUS MATERIAL INVENTORY

DATE	Blue-Grey 8010-01-354-0961 Qt kit 35237		Liquor Red 8010 00 641 3452 PINT SPRAY		White 8010-01-285-3035 Qt Kit 17925		Stripper 8010-00-181-7568 Gallon Can		Remore Gallon Can	
	+/-	TOTAL	+/-	TOTAL	+/-	TOTAL	+/-	TOTAL	+/-	TOTAL
1.		3 1/2		6	+4	4				
2.		3 1/2		6		1			+12	12
3.		3 1/2	+12	18		4	+6	6		12
4.		3 1/2	-1	17		4		6		12
5.		3 1/2		17		4		6		12
6.		3 1/2		17		4		6		12
7.		3 1/2		17		4		6		12
8.		3 1/2		17		4		6		12
9.		3 1/2		17		4		6		12
10.		3 1/2		17		4		6		12
11.		3 1/2	-1	16		4		6		12
12.		3 1/2		16		4		6		12
13.		3 1/2		16		4		6		12
14.		3 1/2		16		4		6		12
15.		3 1/2		16		4		6	-1	11
16.		3 1/2		16		4		6		11
17.		3 1/2	-1	15		4		6		11
18.		3 1/2		15		4		6		11
19.		3 1/2		15		4		6		11
20.		3 1/2		15		4		6		11
21.		3 1/2		15		4		6		11
22.		3 1/2		15		4		6		11
23.		3 1/2		15		4		6		11
24.		3 1/2		15		4		6		11
25.		3 1/2		15		4		6		11
26.		3 1/2		15		4		6		11
27.		3 1/2		15		4		6		11
28.		3 1/2		15		4		6		11
29.		3 1/2		15		4		6		11
30.		3 1/2		15		4		6		11
31.		3 1/2		15		4		6		11

~~8~~ 8 29 30  
Gloss BLK ENAMEL 2K Gall 6  
1 PINT GRAY WALK  
8010 00 079 3752 8010 00 641 0426  
50 sure 1 Gal  
12 or ?  
21 17

HAZARDOUS MATERIAL INVENTORY

DATE	Rain Erosion Coat 8010-00-459-1756 2.25 gal kit Black		Alodine 8030-00-142-9272 pt		Walkway Comp 8010-00-641-0427 Gal Black		CPC Solvent cutbk 8030-00-903-0931 pint		CPC Solvent cut 8030-00-062-6950 qt	
	+/-	TOTAL	+/-	TOTAL	+/-	TOTAL	+/-	TOTAL	+/-	TOTAL
1.		4		49		1		0		0
2.		4		49		1		0		0
3.		4		49		1		0		0
4.		4		49		1		0		0
5.		4		49		1		0		0
6.		4		49		1		0		0
7.		4		49		1		0		0
8.		4		49		1		0		0
9.		4		49		1		0		0
10.		4		49		1		0		0
11.		4		49		1		0		0
12.		4		49		1		0		0
13.		4		49		1		0		0
14.		4		49		1		0		0
15.		4		49		1		0		0
16.		4		49		1		0		0
17.		4		49		1		0		0
18.		4		49		1		0		0
19.		4		49		1		0		0
20.		4		49		1		0		0
21.		4		49		1		0		0
22.		4		49		1		0		0
23.		4		49		1		0		0
24.		4		49		1		0		0
25.		4		49		1		0		0
26.		4		49		1		0		0
27.		4		49		1		0		0
28.		4		49		1		0		0
29.		4		49		1		0		0
30.		4		49		1		0		0
31.		4		49		1		0		0

27

28

15  
29

X

X

## HAZARDOUS MATERIAL INVENTORY

DATE	Polymide Primer 8010-00-435-7080 2 qt kit		Polymide Primer 8010-00-142-9279 2 pt kit		Zinc Chromate 8010-00-899-8825 pint spray Primer		Walkway gray 8010-00-141-7842 gal 36440		Lacquer Red 8010-00-551-7932 gal 11136	
	+/-	TOTAL	+/-	TOTAL	+/-	TOTAL	+/-	TOTAL	+/-	TOTAL
1.		3		0		16		3		4
2.		3		0		16		3		4
3.	-1	2		0	-2	14		3		4
4.		2		0	-2	14		3		4
5.		2		0		14		3		4
6.		2		0		14		3		4
7.		2		0		14		3		4
8.		2		0		14		3		4
9.		2		0		14		3		4
10.		2		0		14		3		4
11.		2		0		14		3		4
12.		2		0		14		3		4
13.		2		0	-1	13		3		4
14.		2		0		13		3		4
15.		2		0		13		3		4
16.		2		0	-1	12		3		4
17.		2		0		12		3		4
18.		2		0		12		3		4
19.		2		0		12		3		4
20.		2		0		12		3		4
21.		2		0	-1	11		3		4
22.		2		0		11		3		4
23.		2		0		11		3		4
24.		2		0		11		3		4
25.		2		0		11		3		4
26.		2		0		11		3		4
27.		2		0		11		3		4
28.		2		0	+1	12		3		4
29.		2		0		12		3		4
30.		2		0		12		3		4
31.		2		0		12		3		4

~~12~~  
12

X

21

~~14~~  
14

~~14~~  
14

HAZARDOUS MATERIAL INVENTORY

DATE	Gray primerless 6810-01-354-0963 qt kit 36320		Insignia Blue 8010-00-181-8284 2 qt kit 15044		Camo Black 8010-01-482-5671 2 qt kit 37038		Camo Blue 8010-01-117-7693 2 qt kit 35237		Gray 8010-01-068-3115 2 qt kit 16440	
	+/-	TOTAL	+/-	TOTAL	+/-	TOTAL	+/-	TOTAL	+/-	TOTAL
1.		3 1/2		2		3		0		6
2.		3 1/2		2		3		0		6
3.		3 1/2		2		3		0		6
4.		3 1/2		2		3		0		6
5.		3 1/2		2		3		0		6
6.		3 1/2		2		3		0		6
7.		3 1/2		2		3		0		6
8.		3 1/2		2		3		0		6
9.		3 1/2		2		3		0		6
10.		3 1/2		2		3		0		6
11.		3 1/2		2		3		0		6
12.		3 1/2		2		3		0		6
13.		3 1/2		2		3		0		6
14.		3 1/2		2		3		0		6
15.		3 1/2		2		3		0		6
16.		3 1/2		2		3		0		6
17.		3 1/2		2		3		0		6
18.		3 1/2		2		3		0		6
19.		3 1/2		2		3		0		6
20.		3 1/2		2		3		0		6
21.		3 1/2		2		3		0		6
22.		3 1/2		2		3		0		6
23.		3 1/2		2		3		0		6
24.		3 1/2		2		3		0		6
25.		3 1/2		2		3		0		6
26.		3 1/2		2		3		0		6
27.		3 1/2		2		3		0		6
28.		3 1/2		2		3		0		6
29.		3 1/2		2		3		0		6
30.		3 1/2		2		3		0		6
31.		3 1/2		2		3		0		6

7 ~~8~~

~~9~~  
9

~~10~~  
10

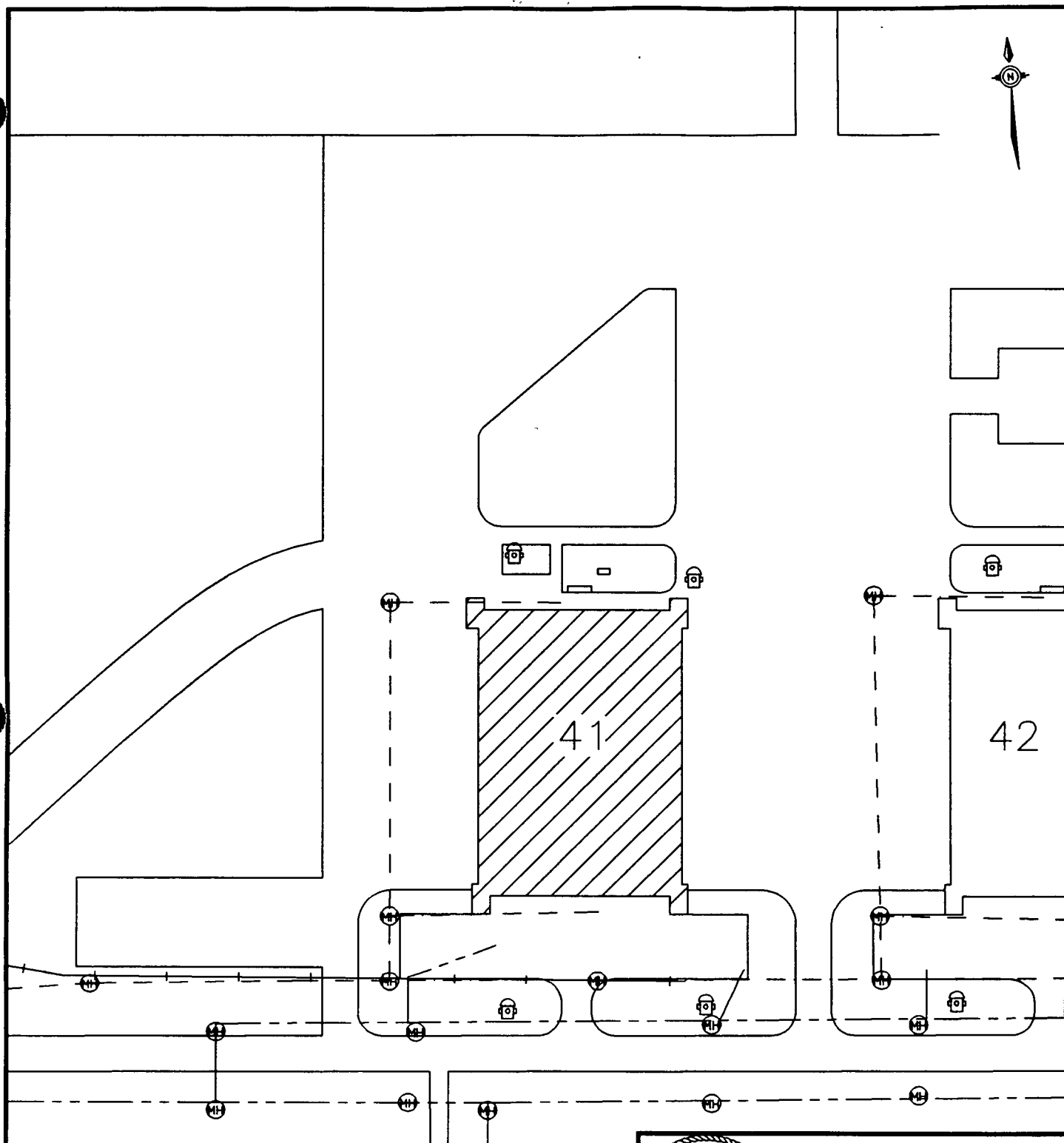
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~~11~~  
11

<b>Immediate Spill Response Emergency Action Plan</b>			
<b>Hangar 41: U.S. Coast Guard</b>			
<b>WARNING:</b> Designated personnel at this facility have been specifically tasked, trained, and equipped to respond to oil and hazardous substance spills. Unauthorized individuals shall never undertake the response or investigation to any actual or suspected oil or hazardous substance spills			
<b>I. IMMEDIATELY REPORT</b> spills by the most expeditious means (e.g., voice, telephone) to your supervisor, or contact the <b>FACILITY EMERGENCY COORDINATOR</b> as listed below:			
<b>Facility Emergency Coordinator</b>	<b>Shop</b>	<b>Title</b>	<b>Phone Ext.</b>
AM1 William Turnbull AM1 Mike Octon	CG CG	Hazardous Material Coordinator Group OPS Duty Officer	6330 6329
IF CONTACT CANNOT BE MADE WITH THE FACILITY EMERGENCY COORDINATOR, <b>REPORT SPILLS IMMEDIATELY</b> to:  <b>FIRE DEPARTMENT EXT. 3333</b>  Number of Persons Working at this site: 100			
<b>II. FIRE SAFETY PLAN</b>			
<b>A. Equipment</b>			
The hangar area is equipped with a AFFF system that is activated automatically or manually by hangar personnel. The offices are equipped with a automatic sprinkler system. Halon fire extinguishers are at approximately every other column and near each hangar area exit. Fire alarms and AFFF are in the same vicinity. Emergency response is initiated by fire alarm or from telephone in the office area.			
<b>B. Building Construction/Activity Description</b>			
Coast Guard Air Station, NAS Corpus Christi mission is maintenance and support of deployed helicopter and fixed-wing aircraft used in search and rescue operations. Operations performed in Hangar 41 are generally related to the maintenance of helicopters and fixed-wing jet aircraft. The facility is of cinder block with metal roof deck construction and is on Ocean Drive. Hazardous waste generated by this operation is stored at a temporary hazardous waste storage building immediately north of Hangar 41.			

<b>Immediate Spill Response Emergency Action Plan</b>	
<b>Hangar 41: U.S. Coast Guard</b>	
<b>III.</b>	<b>SITE HAZARDOUS SUBSTANCE INFORMATION</b>
<b>A.</b>	<b>Inventory</b>
<p>While the activities performed in this facility require handling and using of hazardous materials, all materials are maintained in daily-use quantities of 5 gallons or less, other than hazardous waste satellite accumulation areas and oils and lubricants. All hazardous materials are stored in flammable storage lockers located at various in the hangar area. Table ANNEX 1 - 8.0, Typical Site Inventory: USCG, Hangar 41.</p>	
<b>B.</b>	<b>Probable Spill Route</b>
<p>The following spill scenarios were identified as most likely at Hangar 41:</p> <p><u>Spill of Hazardous Substance at Temporary Storage Area:</u>  The specific materials stored in this area are clearly identified by appropriate labeling and most are 55-gallon drums. The maximum spill potential for this site is approximately 55 gallons albeit fire/explosion or introduction of water or fire extinguishing media. The temporary storage area is appropriately constructed of impermeable material and is sloped, bermed, and equipped with sumps of adequate volume.</p> <p><u>Spill of Hazardous Substance in Hangar Area</u>  The specific materials used in this area include aircraft fuel, and various solvents and paints. The solvents and paints used in this area are stored in remotely located flammable storage lockers. The materials are either aerosols or are transferred to approved dispensers for use in the hangar area. The maximum spill potential within the hangar area is from aircraft fuel (500 lbs) and solvents (5 gal.). A spill in the hangar area will drain to the east or west toward the airfield apron and a floor drain that extends along the hangar perimeter.</p>	
<b>C.</b>	<b>Spill Response Equipment and Materials</b>
<p>There are 55-gallon spill kits located throughout the hangar area and in the temporary storage areas.</p>	

Last updated: ~~November~~ 1994



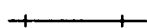
LEGEND



MANHOLE



FIRE HYDRANT



RAILROAD

180 0 180



SCALE

FEET

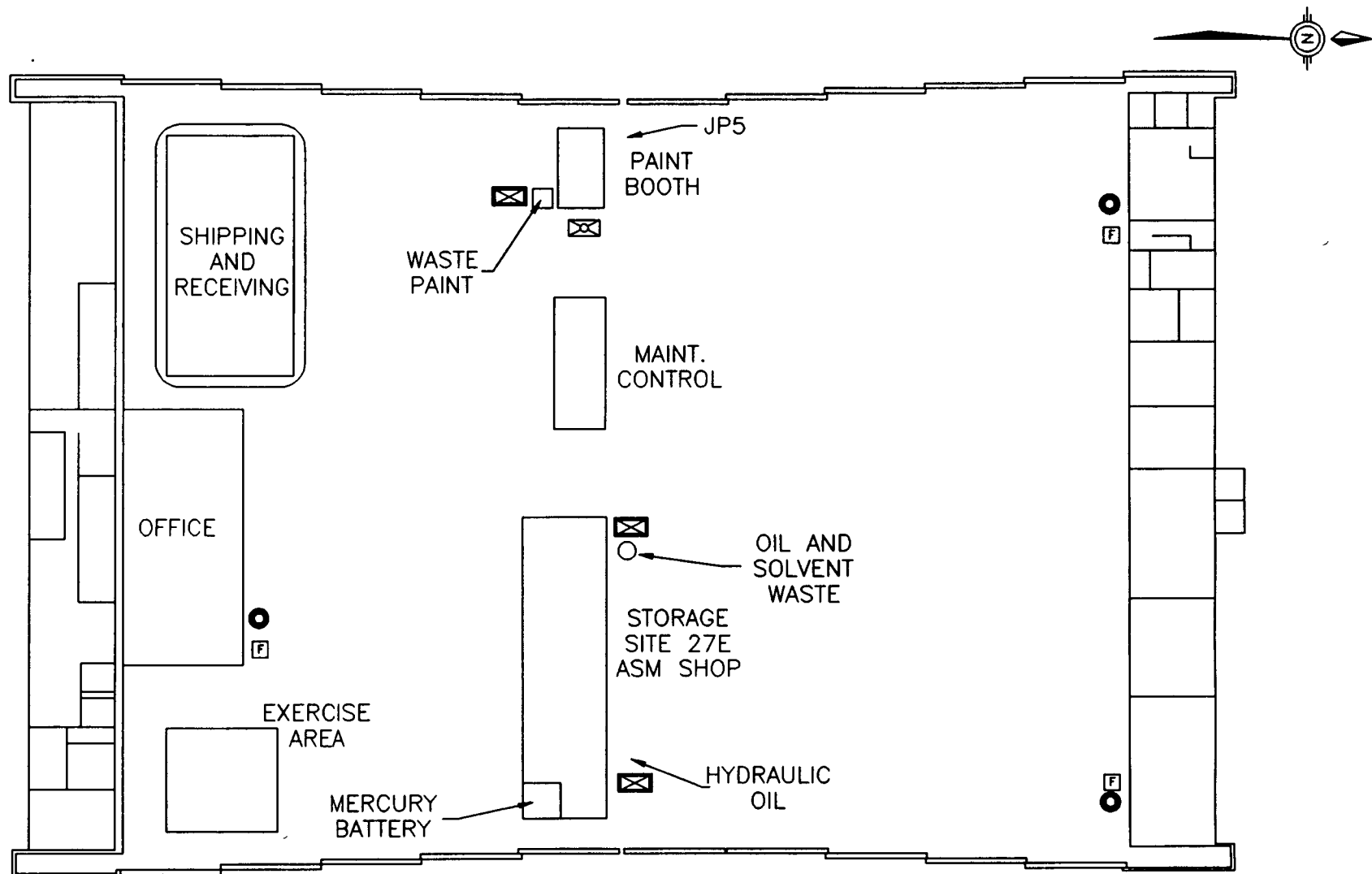


NAS CORPUS CHRISTI  
OHS CONTINGENCY PLAN

USGC  
HANGAR 41  
VICINITY PLAN

DWG DATE: 01/14/97 DWG NAME: 91CP13

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50 0 50  
SCALE FEET

#### LEGEND

- - FIRE ALARM
- F - FIRE EXTINGUISHER
- ⊠ - SPILL KIT
- ⊠ - FLAMMABLE LOCKER



NAS CORPUS CHRISTI  
OHS CONTINGENCY PLAN

US COAST GUARD  
HANGAR 41  
FLOOR PLAN

DWG DATE: 01/14/97 DWG NAME: 91CP14

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**List ANNEX 1 - 8.0**  
**Typical Site Inventory: USCG, Hangar 41**

Last updated: November 1994

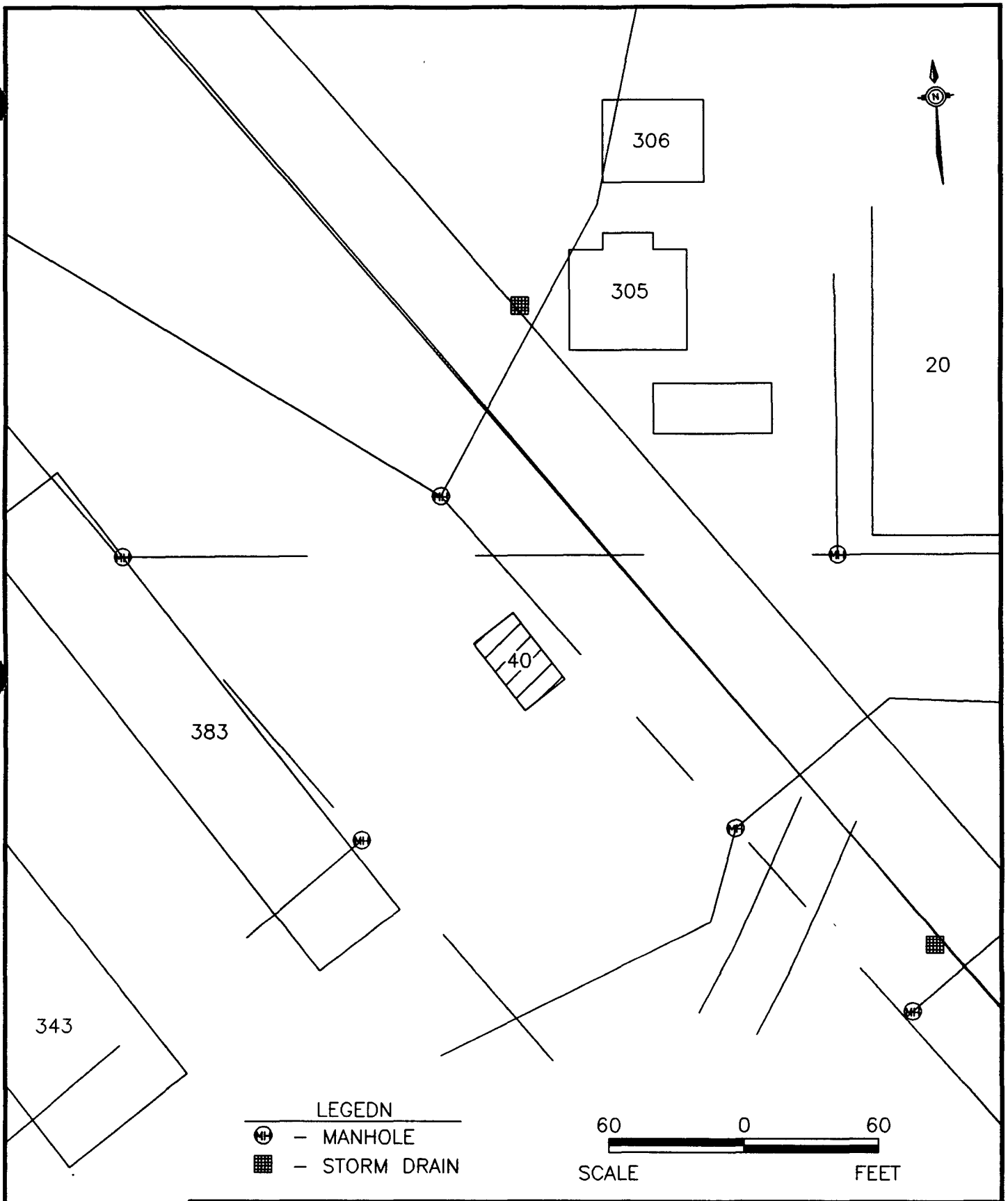
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PACKAGE NO#	MATERIAL	GAL'S	PACKAGE
1.	00-181-8097 SHIPBOARD OIL, LUBRICANT	255	D, P-3
2.	00-201-0905 ALCOHOL DENATURED	125	D
3.	GREASE	15	D, P-4
4.	00-238-8119 ALIPHATIC NAPA TYPE II	55	D
5.	LUBRICANT OIL 40 GRADE	85	D
6.	83282 HYDRAULIC FLUID	105	D
7.	00-681-5999 AIRCRAFT ENGINE OIL	105	D
8.	00-224-8353 METHANOL	55	D
9.	DETERGENT GENERAL PURPOSE	55	D
10.	CRC OIL	110	D
11.	10-10 OIL	55	D
12.	00-526-1605 CORROSION PREVENTIVE COMPOUND	75	P-1,2
13.	VARNISH ELECTRICAL WIRE	16	P-2,4
14.	PD-680	5	P-2
15.	00-252-6380 CUTTING FLUID	10	P-2
16.	00-082-2425 COATING COMPOUND	20	P-3
17.	FLOOR WAX	30	P-3,4
18.	00-181-7597 ENGINE GAS PATH CLEANER	10	P-3
19.	TENNANT CLEANING COMPOUND	20	P-4
20.	DESICCANT	5	P-4
21.	LUBRICANT WIRE PULLING	5	P-4
22.	GLUES/SEALING COMPOUNDS	30	P-5
23.	HAZARDOUS WASTE OIL/SOLVENT	55	D
TOTAL		1,271	

<b>Immediate Spill Response Emergency Action Plan</b>			
<b>Public Works Pest Control - Building 40</b>			
<b>WARNING:</b> Designated personnel at this facility have been specifically tasked, trained, and equipped to respond to oil and hazardous substance spills. Unauthorized individuals shall never undertake the response or investigation to any actual or suspected oil or hazardous substance spills			
<b>I. IMMEDIATELY REPORT</b> spills by the most expeditious means (e.g., voice, telephone) to your supervisor, or contact the <b>FACILITY EMERGENCY COORDINATOR</b> as listed below:			
<b>Facility Emergency Coordinator</b>	<b>Shop</b>	<b>Title</b>	<b>Phone Ext.</b>
Ray James	PW	Pest Control Technician	4327
IF CONTACT CANNOT BE MADE WITH THE FACILITY EMERGENCY COORDINATOR, <b>REPORT SPILLS IMMEDIATELY</b> to:  <b>FIRE DEPARTMENT EXT. 3333</b>  Number of Persons Working at this sites: 2			
<b>II. FIRE SAFETY PLAN</b>			
<b>A. Equipment</b>			
Carbon Dioxide and Class A fire extinguishers are in the office area and in the pesticide storage area. The building has exhaust fans in each pesticide storage area and in the area in which pesticides are prepared for application. Emergency response is initiated from a telephone in the offices.			
<b>B. Building Construction/Activity Description</b>			
Building 40 is a cinder block building with sheet metal roof deck, enclosed and ventilated pesticide storage area, and outside mixing and staging area. The facility is primarily used to store and mix pesticides/herbicides. The facility, operated by Public Works personnel, is on First Street.			
<b>III. SITE HAZARDOUS SUBSTANCE INFORMATION</b>			
<b>A. Inventory</b>			
Typical categories of materials stored in Building 40 include solvents, pesticides, and herbicides. Typical categories of materials used and stored in Buildings 40 are listed in Table Annex 1 - 9.0. That Hazardous Substance Inventory lists the materials approved for storage at this facility as of 1 November 1994.			

<b>Immediate Spill Response Emergency Action Plan</b>	
<b>Public Works Pest Control - Building 40</b>	
<b>B.</b>	<b>Probable Spill Route</b>
<p>The following spill scenarios were identified as most likely at building 40:</p> <p><u>Spill of Hazardous Substance Inside the Building:</u></p> <p>The specific materials stored in this area are clearly identified by appropriate labeling. The maximum inside spill potential for this site is approximately 5 gallons. The inside storage area is are bermed and sloped which will effectively contain the maximum spill volume. Incompatible materials stored in the area are separated by distance but not by effective containment berming.</p> <p><u>Spill of Hazardous Substance in Mixing Area:</u></p> <p>The maximum spill potential within this area would range from 5 to 500 gallons. Pesticides which are most often mixed in small quantities, would be contained within the mixing area.</p>	
<b>C.</b>	<b>Spill Response Equipment and Materials</b>
<p>A 55-gallon spill kit is in the pesticide storage area. In addition, pesticide application technicians are equipped with appropriate PPE to perform response to a pesticide/herbicide spill at or around the facility.</p>	

Last updated: November 1994

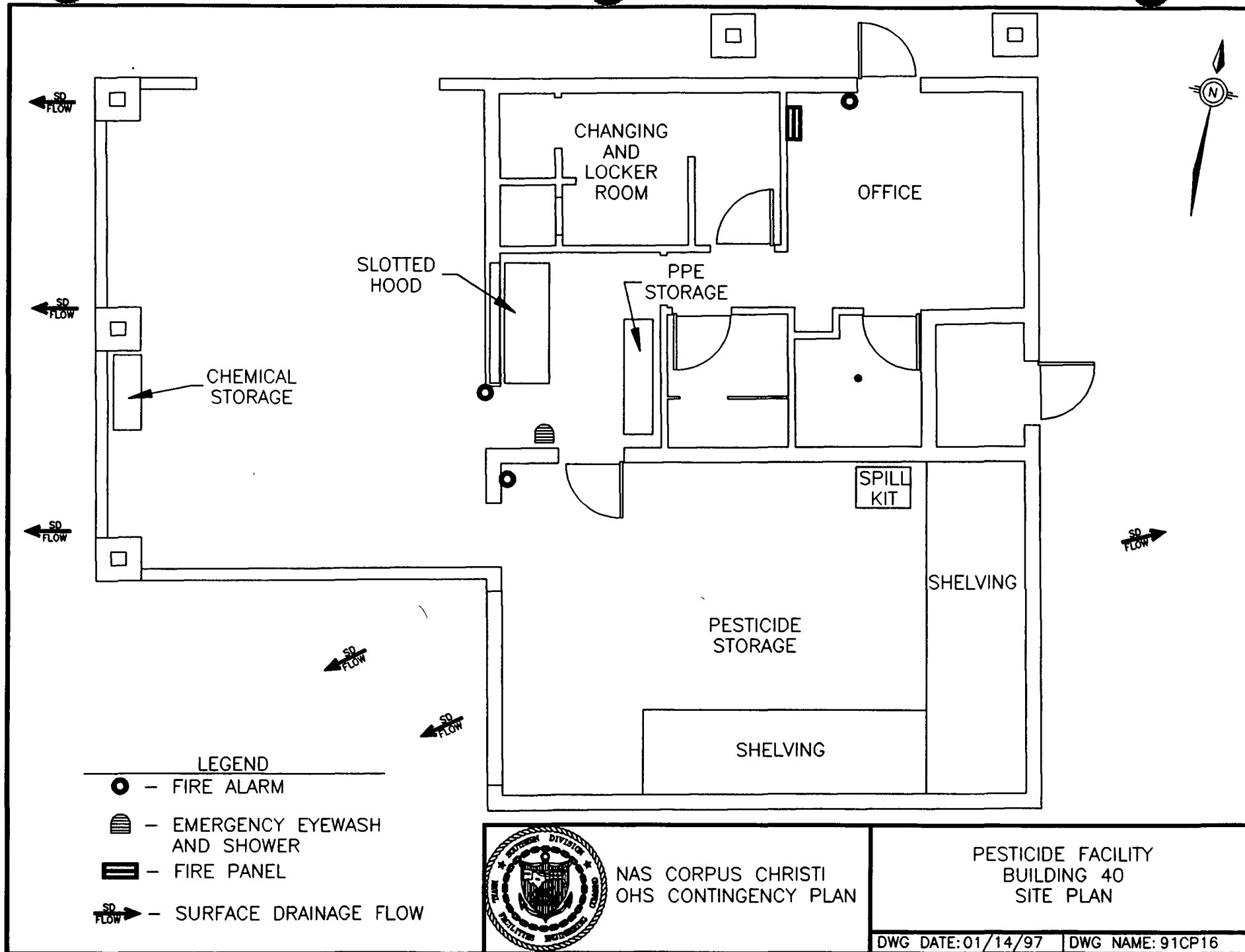


NAS CORPUS CHRISTI  
OHS CONTINGENCY PLAN

PEST CONTROL  
BUILDING 40  
VICINITY PLAN

DWG DATE: 01/14/97 DWG NAME: 91CP15

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<p align="center"><b>List ANNEX 1 - 9.0</b>  <b>Building 40</b>  <b>Hazardous Substance Inventory</b></p>
-------------------------------------------------------------------------------------------------------------------

Alcohol Denatured	4	gals.
Aluminum Phosphide	1	Partial can
AMDRO	53.5	lbs.
Anticoagulant	228	lbs.
Bactimos	260	briquets
Bora-Care	4	gals.
Carbaryl	5	10 lb. bags
Combat (Large)	76	bxs.
Combat (Small)	758	bait stations
CTL Industrial Spray	9	cans
Diazinon Ganules	3	bags
Diazinon 4E	14.5	gals.
Diquat	7	gals.
Dursban 4E	11	gals.
Dursban Granules	126	lbs.
Dursban L.O.	77	1-oz. btls.
Dursban TC	8	gals.
D-Phenothrin	55	cans
Ficam	4	1-lb. jars
Gencor	31	btls.
Hyvar-X	17	barrels/875 lbs.
Talon-G	58.6	lbs.
Malathion	2.5	barrels
Max-Force	153	bait stations
MSMA HC	63	gals.
Mr. Sticky	170	bait stations
Precor	463	btls.
Pyrethrin	51	cans
Round-Up	5	gals.
Soap-Deodorant	1	gals.
Soap-General Purpose	10	gals.
Soap-Laundry	1.5	drums
Strychnine	7	gals.
ULD BP 100 Insecticide	4	gals.
WASP (Ficam)	3	cans
J&B Wasp & Hornet	46	cans
Precor Fogger	127	cans
Precor 2000	52	cans

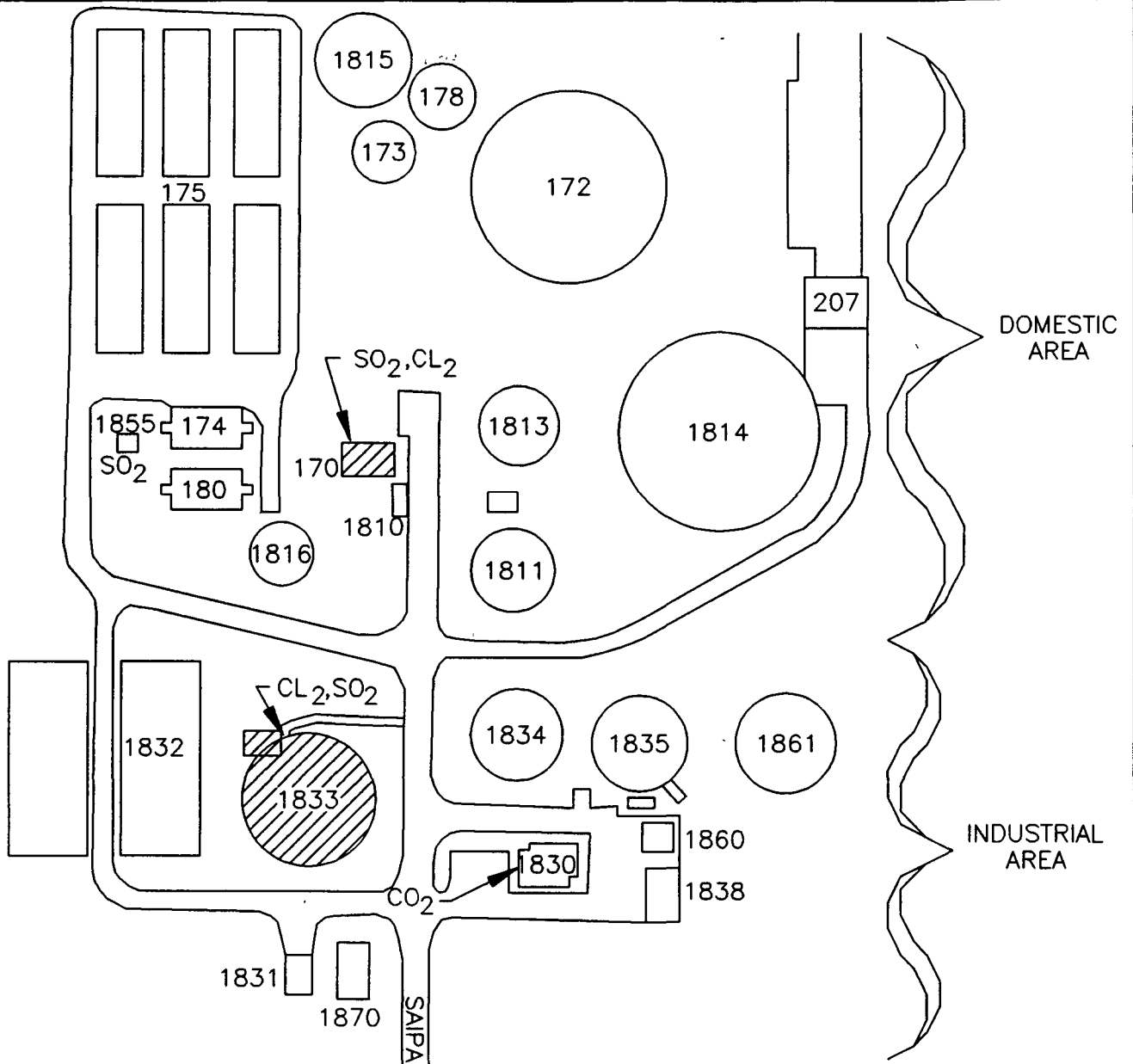
Last updated: November 1994

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<b>Immediate Spill Response Emergency Action Plan</b>			
<b>Industrial/Domestic Wastewater Treatment Facility</b>			
<b>WARNING:</b> Designated personnel at this facility have been specifically tasked, trained, and equipped to respond to oil and hazardous substance spills. Unauthorized individuals shall never undertake the response or investigation to any actual or suspected oil or hazardous substance spills			
<b>I. IMMEDIATELY REPORT</b> spills by the most expeditious means (e.g., voice, telephone) to your supervisor, or contact the <b>FACILITY EMERGENCY COORDINATOR</b> as listed below:			
<b>Facility Emergency Coordinator</b>	<b>Shop</b>	<b>Title</b>	<b>Phone Ext.</b>
Charlie Potts Victor Mendez	52 52	Supervisor Work Leader	2567 3297
IF CONTACT CANNOT BE MADE WITH THE FACILITY EMERGENCY COORDINATOR, REPORT SPILLS IMMEDIATELY to:  <b>FIRE DEPARTMENT EXT. 5333</b>  Number of Persons Working at this site: 5			
<b>II. FIRE SAFETY PLAN</b>			
<b>A. Equipment</b>			
AB dry chemical, CO <sub>2</sub> , and Halon fire extinguishers, are throughout the facility. The chlorine/sulfur dioxide storage area is equipped with a leak detection system. The system has an audible and visual alarm. Emergency response is initiated by FM radio or telephone from the office area. This facility is not equipped with an automatically or manually activated fire suppression system or heat/smoke detectors.			
<b>B. Building Construction/Activity Description</b>			
Chlorine/Sulfur Dioxide are stored and metered in two buildings at the facility, one for the industrial wastewater treatment plant is in Building 1830, and one for the domestic wastewater plant (Building 170). Both buildings are one-story structures with a concrete slab floor and a metal roof. The facility (Building 1833) is manned full time. The facility is operated by the Public Works Department, and is on Ocean Drive.			
<b>III. SITE HAZARDOUS SUBSTANCE INFORMATION</b>			
<b>A. Inventory</b>			
This facility uses chlorine and sulfur dioxide gas to treat industrial and domestic wastewater. The inventory typically ranges from 3 to 5 150-pound compressed chlorine gas cylinders and 3 to 5 150-pound compressed sulfur dioxide cylinders in Building 1833 and 2 1-ton compressed chlorine gas cylinders and 3 to 5 150-pound compressed sulfur dioxide cylinders in Building 170.			

<b>Immediate Spill Response Emergency Action Plan</b>	
<b>Industrial/Domestic Wastewater Treatment Facility</b>	
<b>B.</b>	<b>Probable Spill Route</b>
<p>The following spill scenario was identified as most likely at Buildings 1833 1794:</p> <p><u>Release of Chlorine or Sulfur Dioxide Gas:</u></p> <p>The maximum release potential of chlorine or sulfur dioxide gas for this site would be 1 ton of gas, which would migrate to downwind locations.</p>	
<b>C.</b>	<b>Spill Response Equipment and Materials</b>
<p>Each wastewater treatment technician carries a self-contained positive-pressure breathing apparatus and a Chlorine "A" kit when working onsite.</p>	

Last updated: ~~November 1994~~



NAS CORPUS CHRISTI  
OHS CONTINGENCY PLAN

DOMESTIC AND INDUSTRIAL  
WASTEWATER TREATMENT  
SITE PLAN

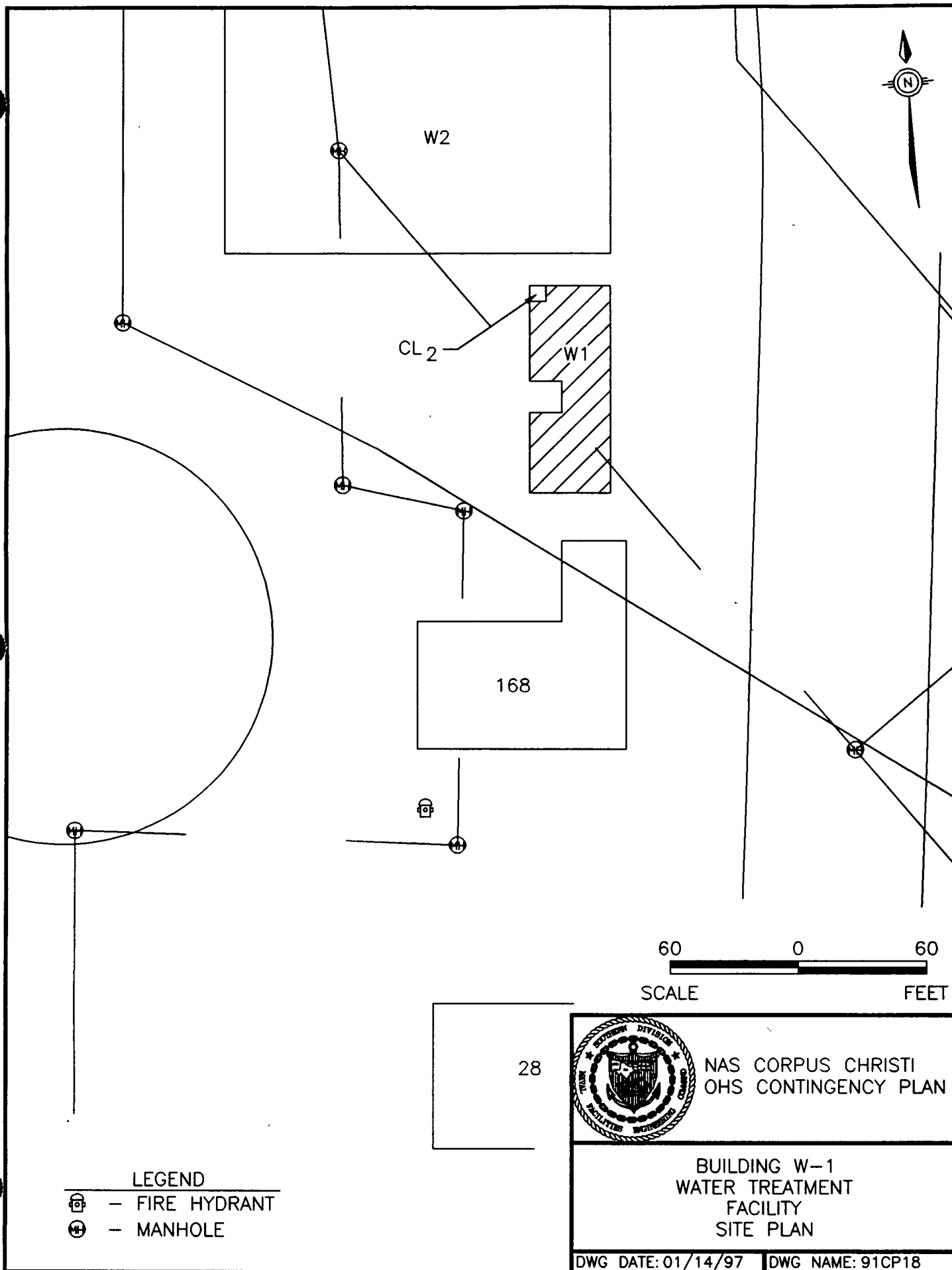
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<b>Immediate Spill Response Emergency Action Plan</b>			
<b>Building W-1 - Water Treatment Facility</b>			
<b>WARNING:</b> Designated personnel at this facility have been specifically tasked, trained, and equipped to respond to oil and hazardous substance spills. Unauthorized individuals shall never undertake the response or investigation to any actual or suspected oil or hazardous substance spills			
<b>I. IMMEDIATELY REPORT</b> spills by the most expeditious means (e.g., voice, telephone) to your supervisor, or contact the <b>FACILITY EMERGENCY COORDINATOR</b> as listed below:			
<b>Facility Emergency Coordinator</b>	<b>Shop</b>	<b>Title</b>	<b>Phone Ext.</b>
Charlie Potts	52	Supervisor	2567
IF CONTACT CANNOT BE MADE WITH THE FACILITY EMERGENCY COORDINATOR, <b>REPORT SPILLS IMMEDIATELY</b> to:  <b>FIRE DEPARTMENT EXT. 3333</b>  Number of Persons Working at this site: 1			
<b>II. FIRE SAFETY PLAN</b>			
<b>A. Equipment</b>			
AB dry chemical, CO <sub>2</sub> , and halon fire extinguishers are throughout the facility. The chlorine storage and metering system area is equipped with a leak detection and alarm system. The system has an audible and visible alarm. Emergency response is initiated by FM radio or telephone from the office area. This facility is equipped with automatically or manually activated fire suppression system or heat/smoke detectors.			
<b>B. Building Construction/Activity Description</b>			
The chlorine building is a one-story, fully enclosed structure with a concrete slab floor and a built-up roof. The facility is not manned full time. The facility, operated by the Public Works Department, is on Ocean Drive.			
<b>III. SITE HAZARDOUS SUBSTANCE INFORMATION</b>			
<b>A. Inventory</b>			
This facility uses chlorine gas to treat domestic water. The inventory typically ranges from 3 to 5 150-lb compressed chlorine gas cylinders.			

<b>Immediate Spill Response Emergency Action Plan</b>
<b>Building W-1 - Water Treatment Facility</b>
<b>B. Probable Spill Route</b>
<p>The following spill scenario was identified as most likely at Building W-1:</p> <p><u>Release of Chlorine Gas:</u></p> <p>The maximum release potential of chlorine gas for this site would be 1 ton of gas which would migrate to down-wind locations.</p>
<b>C. Spill Response Equipment and Materials</b>
<p>Each waste water treatment technician carries a self-contained positive-pressure breathing apparatus and a Chlorine "A" kit when working at the site.</p>

Last updated: ~~November 1994~~

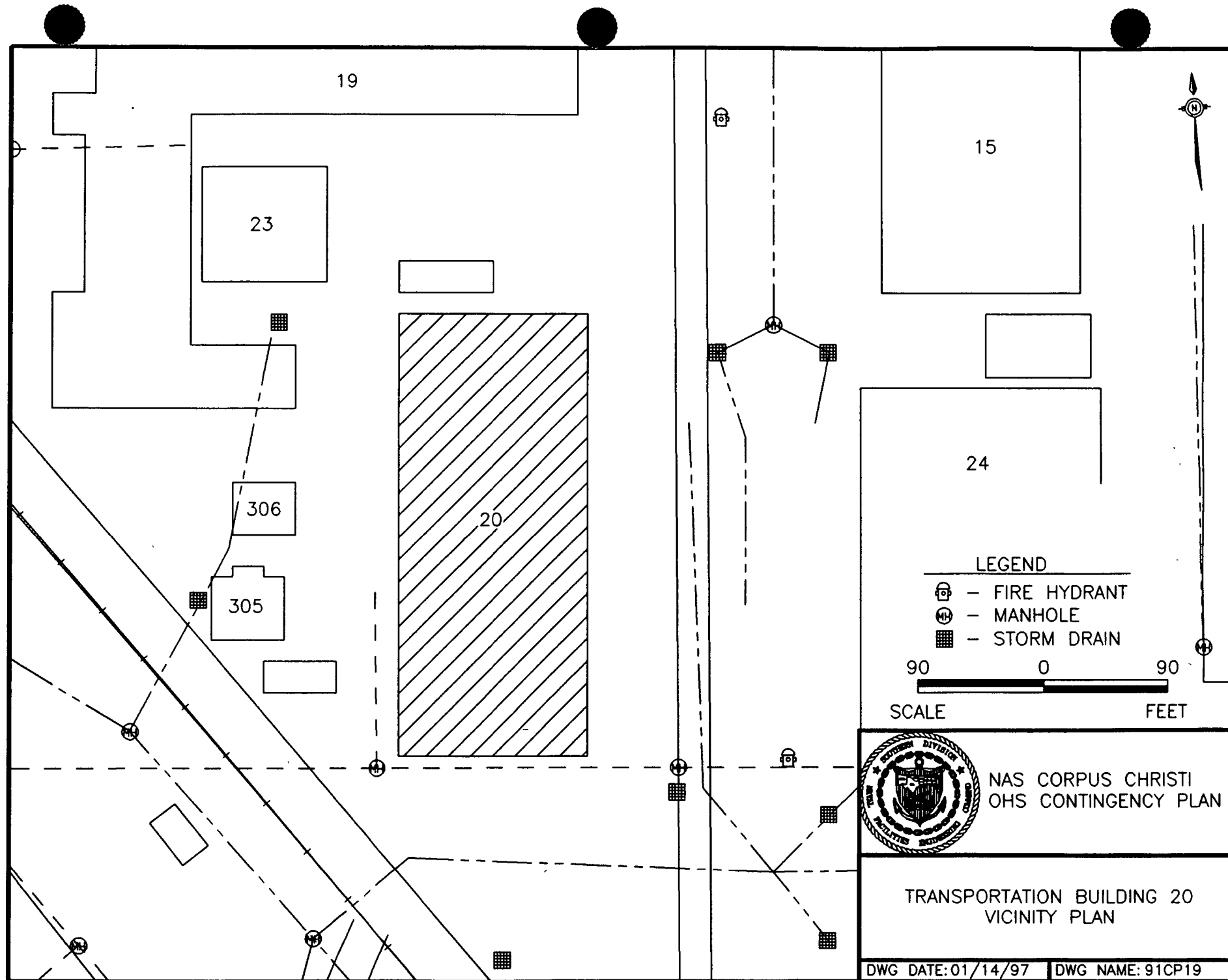


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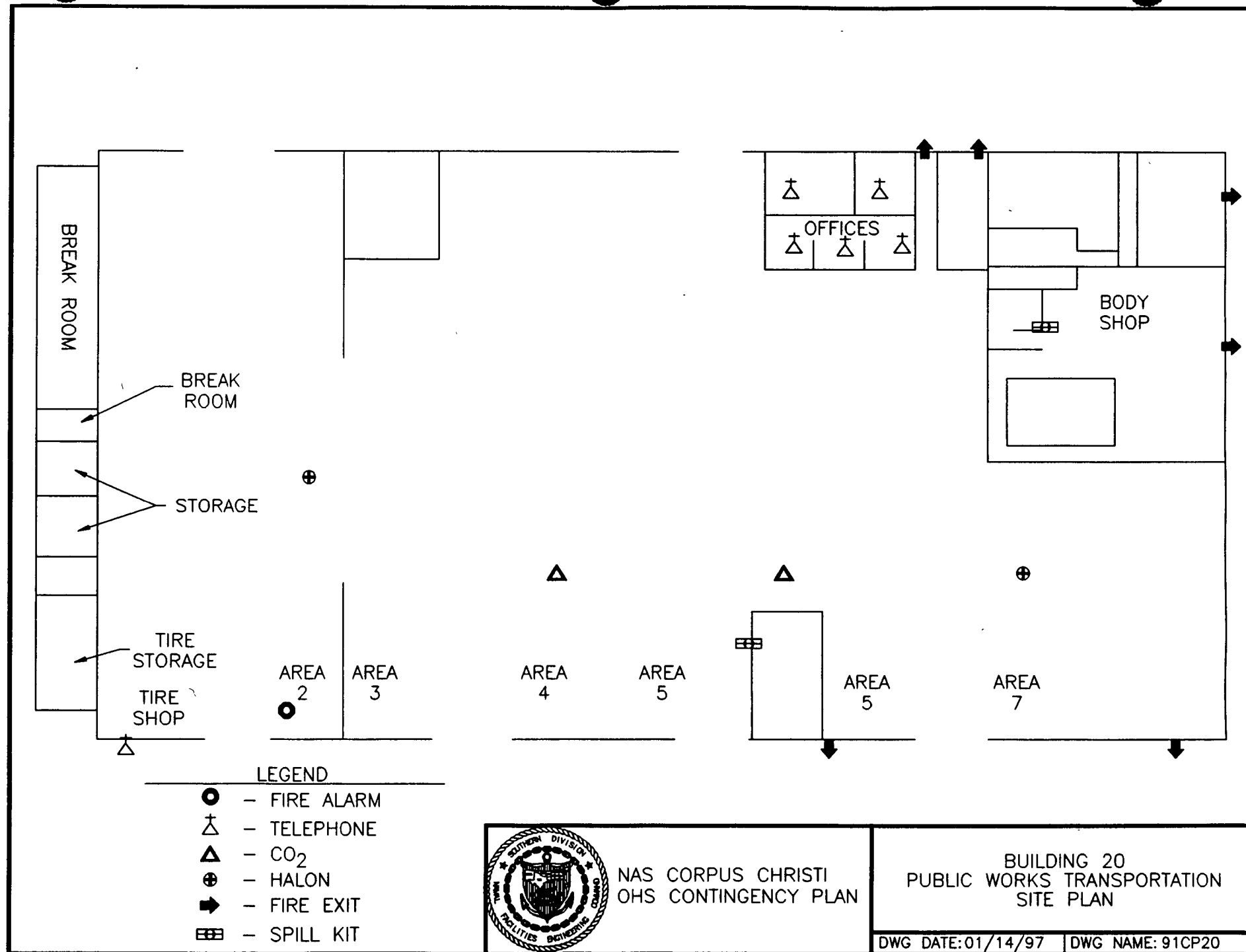
<b>Immediate Spill Response Emergency Action Plan</b>			
<b>Building 20: Transportation Facility</b>			
<b>WARNING:</b> Designated personnel at this facility have been specifically tasked, trained, and equipped to respond to oil and hazardous substance spills. Unauthorized individuals shall never undertake the response or investigation to any actual or suspected oil or hazardous substance spills			
<b>I. IMMEDIATELY REPORT</b> spills by the most expeditious means (e.g., voice, telephone) to your supervisor, or contact the <b>FACILITY EMERGENCY COORDINATOR</b> as listed below:			
<b>Facility Emergency Coordinator</b>	<b>Shop</b>	<b>Title</b>	<b>Phone Ext.</b>
Santos Huerta	186	HW Coordinator	2367
<b>IF CONTACT CANNOT BE MADE WITH THE FACILITY EMERGENCY COORDINATOR, REPORT SPILLS IMMEDIATELY to:</b>  <b>FIRE DEPARTMENT EXT. 3333</b>  Number of Persons Working at this site: 20			
<b>II. FIRE SAFETY PLAN</b>			
<b>A. Equipment</b>			
The building is not equipped with an automatically or manually activated sprinkler system and heat and smoke detectors. Fire extinguishers and alarms are throughout the facility with fire extinguishers approximately 50 feet apart in the garage, and at each building exit. Emergency response is initiated by telephone.			
<b>B. Building Construction/Activity Description</b>			
This facility is of wood and concrete construction and houses an office, administrative area, and garage. The facility serves as a auto/vehicle maintenance center for public works vehicles. The facility is in the public works compound off Second Street.			

<b>Immediate Spill Response Emergency Action Plan</b>	
<b>Building 20: Transportation Facility</b>	
<b>III.</b>	<b>SITE HAZARDOUS SUBSTANCE INFORMATION</b>
<b>A.</b>	<b>Inventory</b>
<p>This activities performed in this facility require the handling and use of hazardous materials; all materials are maintained in daily-use qualities except some petroleum products and lubricants. Table ANNEX 1 - 10.0, Typical Site Inventory: A/V Maintenance Facility.</p>	
<b>B.</b>	<b>Probable Spill Route</b>
<p>The following spill scenario was identified as most likely at the A/V Maintenance Facility:</p> <p><u>Spill of Hazardous Substance inside the Building:</u></p> <p>The specific materials used and stored in this facility are clearly identified by appropriate labeling. The maximum spill potential for this site is approximately 55 gallons. All floor drains within this facility are covered to prevent drainage of petroleum products. Otherwise, hazardous materials, oils and lubricants are controlled using absorbents and drip pans. All loading and unloading operations occur within the building proper.</p>	
<b>C.</b>	<b>Spill Response Equipment and Materials</b>
<p>This facility is equipped with a spill kit.</p>	

Last updated: ~~November 1994~~



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NAS CORPUS CHRISTI  
OHS CONTINGENCY PLAN

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**List Annex 1 - 10.0  
Building 20: Public Works Transportation  
Hazardous Substance Inventory**

**Inside Storage**

<b>Hazardous Substance</b>	<b>Number of 55-Gallon Drums</b>
Motor Oil, Lubricants	8
Paint Waste	2
Flammable Liquid, NOS	2
Antifreeze	2

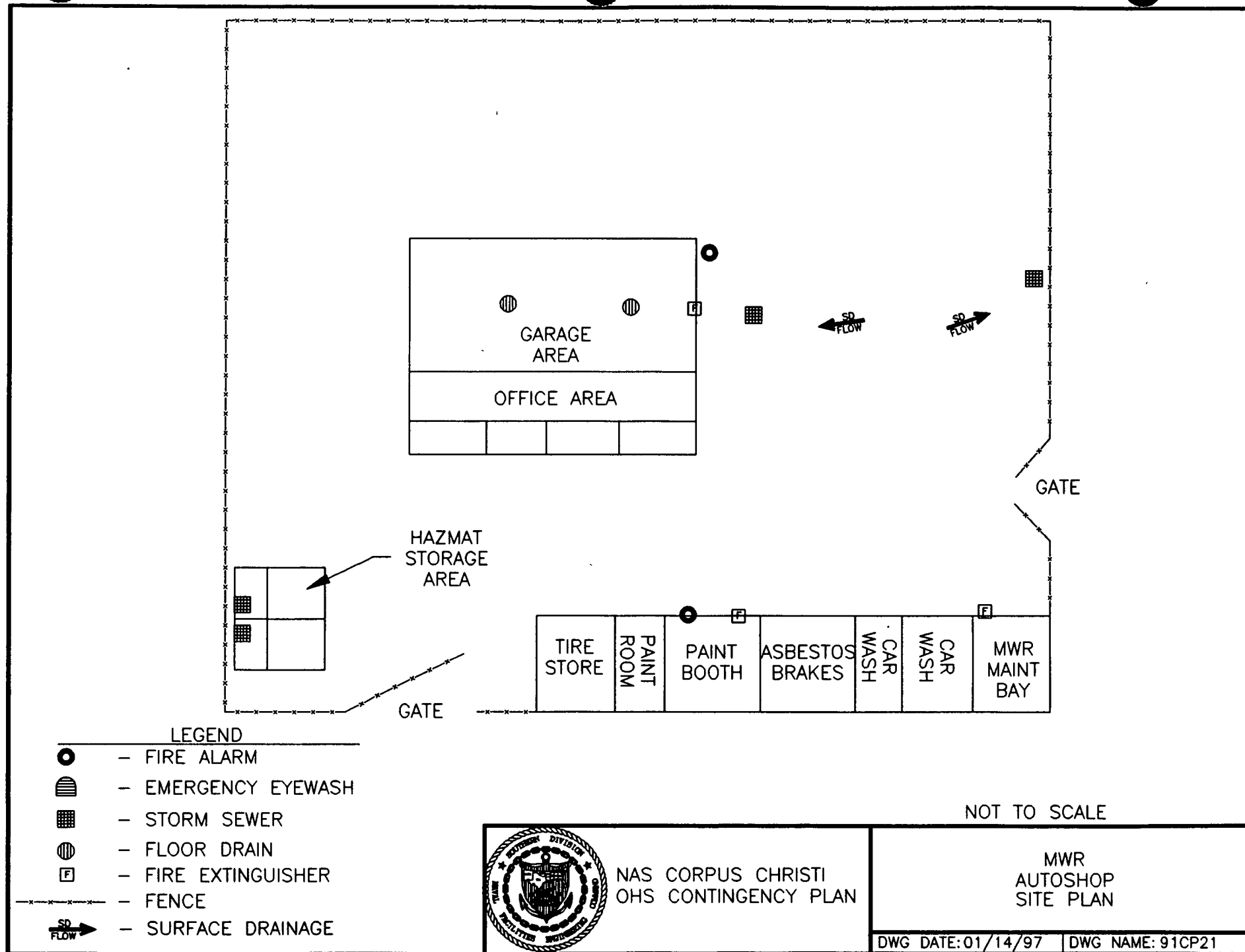
Last updated: November 1994

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<b>Immediate Spill Response Emergency Action Plan</b>			
<b>MWR: Auto Hobby Shop</b>			
<b>WARNING:</b> Designated personnel at this facility have been specifically tasked, trained, and equipped to respond to oil and hazardous substance spills. Unauthorized individuals shall never undertake the response or investigation to any actual or suspected oil or hazardous substance spills			
<b>I. IMMEDIATELY REPORT</b> spills by the most expeditious means (e.g., voice, telephone) to your supervisor, or contact the <b>FACILITY EMERGENCY COORDINATOR</b> as listed below:			
<b>Facility Emergency Coordinator</b>	<b>Shop</b>	<b>Title</b>	<b>Phone Ext.</b>
John Quillin	MWR	HW Coordinator	2907 3470
IF CONTACT CANNOT BE MADE WITH THE FACILITY EMERGENCY COORDINATOR, REPORT SPILLS IMMEDIATELY to:  <b>FIRE DEPARTMENT EXT. 3333</b>  Number of Persons Working at this site: 5			
<b>II. FIRE SAFETY PLAN</b>			
<b>A. Equipment</b>			
The building is not equipped with an automatically or manually activated sprinkler system or heat and smoke detectors. Fire extinguishers and alarms are throughout the facility with fire extinguishers approximately 50 feet apart in the garage, and at each building exit. Emergency response is initiated by telephone.			
<b>B. Building Construction/Activity Description</b>			
This facility is of metal construction and houses office and garage areas. The facility serves as a auto/vehicle maintenance center for base personnel. The facility is on Avenue E.			

<b>Immediate Spill Response Emergency Action Plan</b>	
<b>MWR: Auto Hobby Shop</b>	
<b>III.</b>	<b>SITE HAZARDOUS SUBSTANCE INFORMATION</b>
<b>A.</b>	<b>Inventory</b>
<p>This activities performed in this facility require the handling and use of hazardous materials; all materials are maintained in daily-use qualities except some petroleum products and lubricants. Table ANNEX 1 - 11.0, Typical Site Inventory: MWR: Auto Hobby Shop.</p>	
<b>B.</b>	<b>Probable Spill Route</b>
<p>The following spill scenarios was identified as most likely at the MWR Auto Hobby Shop:</p> <p><u>Spill of Hazardous Substance inside the Building:</u></p> <p>The specific materials used and stored in this facility are clearly identified by appropriate labeling. The maximum spill potential for this site is approximately 55 gallons. All floor drains within this facility are covered to prevent drainage of petroleum products. Otherwise, hazardous materials, oils, and lubricants are controlled using absorbents and drip pans. All loading and unloading operations occur within the building proper.</p>	
<b>C.</b>	<b>Spill Response Equipment and Materials</b>
<p>This facility is equipped with a spill kit.</p>	

Last updated: ~~November~~ 1994



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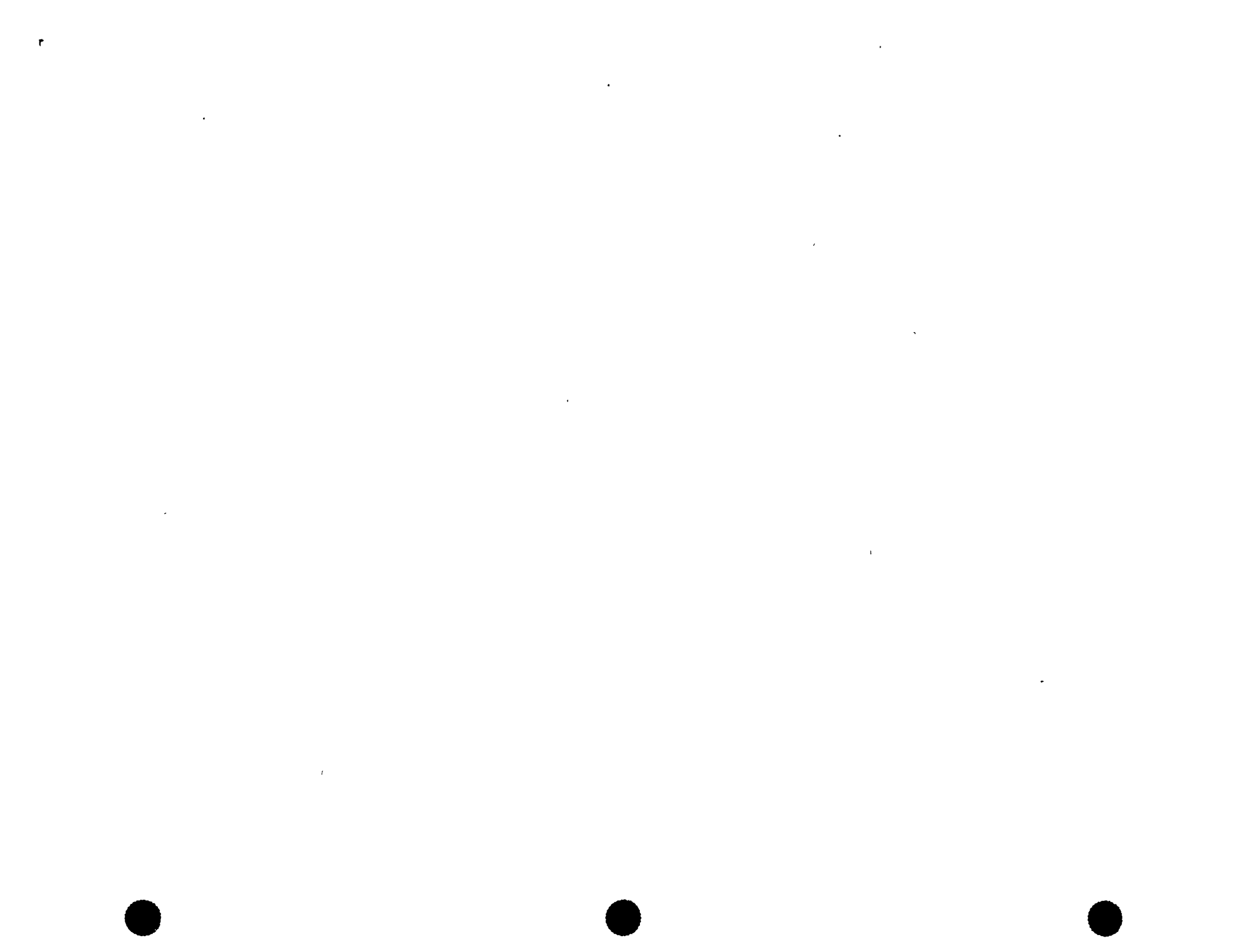
**List ANNEX 1 - 11.0**  
**MWR: Auto Hobby Shop**  
**Hazardous Substance Inventory**  
Last updated: November 1994

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NAVAL AIR STATION, CORPUS CHRISTI, TEXAS  
HAZARDOUS MATERIAL INVENTORY/AUTHORIZED USER LIST  
HMCC:  
DATE OF LATEST UPDATE: \_\_\_\_\_

DEPARTMENT	WORK CENTER	PRODUCT	FSC NITN	MILSPEC	MANUFACTURER/VENDOR	ADDRESS	MSDS NO.
MMR	AUTO HOBBY	PINE OIL	6840 00584712	0-D-1276	LHB	HOUSTON, TX PH:713/527-0561	407
MMR	AUTO HOBBY	GO-JO HAND CLEANER			GO-JO IND.	AIRON, OH.	4011
MMR	AUTO HOBBY	ALL PURPOSE GEAR LUBE			INDUS. LUB	S.A. TX.	4019
MMR	AUTO HOBBY	MARVEL MYSTERY OIL			MARVEL MYSTERY	CHESTER, N.Y.	4022
MMR	AUTO HOBBY	PRESSURE CAR WASH COMPOUND			MAALCO PROD.	BARBERTON, OH.	4024
MMR	AUTO HOBBY	TIRE MOUNTING LUBE			MAALCO PRODUCTS	BARBERTON, OH.	4025
MMR	AUTO HOBBY	VULCANIZING CEMENT			E-Z COMPANY	CANTON, OH	4028
MMR	AUTO HOBBY	DRY CLEANING SOLVENT TYPE 2	9685 00285901	P-D-660	CSD, INC.	CONROE, TX PH:409/756-1065	4038
MMR	AUTO HOBBY	ACETYLENE	6830 00F00258	N/A	WELDING PRODUCTS	MURRAY HILL, NJ PH:201/464-8100	401174
MMR	AUTO HOBBY	6013 RODS	3439 00155686	02-E-450	AIRCO	MURRAY HILL, NJ PH:201/464-8100	401175
MMR	AUTO HOBBY	OXYGEN			NAS SUPPLY		401176
MMR	AUTO HOBBY	6011 RODS			LINCOLN ELECTRIC	CLEVELAND, OH	401177
MMR	AUTO HOBBY	CLEANER FLUID 470			EZ MFG CO.	CANTON, OH	401179
MMR	AUTO HOBBY	LIQUID MICRO COMPOUND			MAALCO PRODUCTS	BARBERTON, OH	401180
MMR	AUTO HOBBY	POLYMER FLVS			MAALCO PRODUCTS	BARBERTON, OH	401181
MMR	AUTO HOBBY	NAVAL JELLY			LOCITTE CORP	CLEVELAND, OH	401182
MMR	AUTO HOBBY	WHITE 82-100			NAFA/MARTIN SENGUR	CLEVELAND, OH 44101	401591
MMR	AUTO HOBBY	SLOW REDUCER 8833			NAFA/MARTIN SENGUR	CLEVELAND, OH 44101	401592
MMR	AUTO HOBBY	MEDIUM REDUCER 8832			NAFA/MARTIN SENGUR	CLEVELAND, OH 44101	401593
MMR	AUTO HOBBY	SLOW THINNER 3094			NAFA/MARTIN SENGUR	CLEVELAND, OH 44101	401594
MMR	AUTO HOBBY	PRIMER 8098			NAFA/MARTIN SENGUR	CLEVELAND, OH 44101	401595
MMR	AUTO HOBBY	BLACK 8800			NAFA/MARTIN SENGUR	CLEVELAND, OH 44101	401596
MMR	AUTO HOBBY	RED 99H-5330			NAFA/MARTIN SENGUR	CLEVELAND, OH 44101	401597
MMR	AUTO HOBBY	BLUE 99L-2017			NAFA/MARTIN SENGUR	CLEVELAND, OH 44101	401598
MMR	AUTO HOBBY	LUE METALLIC 36271			NAFA/MARTIN SENGUR	CLEVELAND, OH 44101	401599
MMR	AUTO HOBBY	MED REDUCER 8004			NAFA/MARTIN SENGUR	CLEVELAND, OH	401600
MMR	AUTO HOBBY	FISH EYE ELIMINATOR 807			NAFA/MARTIN SENGUR	CLEVELAND, OH 44101	401601
MMR	AUTO HOBBY	BLENDING CLEAR 8810			NAFA/MARTIN SENGUR	CLEVELAND, OH 44101	401602
MMR	AUTO HOBBY	CONVERTER 227-S			DUPONT	WILMINGTON, DE 19808	401603
MMR	AUTO HOBBY	VARI PRIMER 616-S			DUPONT	WILMINGTON, DE 19808	401604
MMR	AUTO HOBBY	FAST ENAMEL REDUCER			DUPONT	WILMINGTON, DE 19808	401605
MMR	AUTO HOBBY	GLAZING PUTTY 05964			3M	ST PAUL, MN	401606
MMR	AUTO HOBBY	SMOKE GREY ENAMEL 147A121			ACE	DAK BROOK IL	401607
MMR	AUTO HOBBY	BLACK ENAMEL 186A105			ACE	DAK BROOK IL	401608
MMR	AUTO HOBBY	YELLOW ENAMEL 197A116			ACE	DAK BROOK IL	401609
MMR	AUTO HOBBY	NAVAL JELLY 80276			DURCO	KANSAS CITY, MO	401610

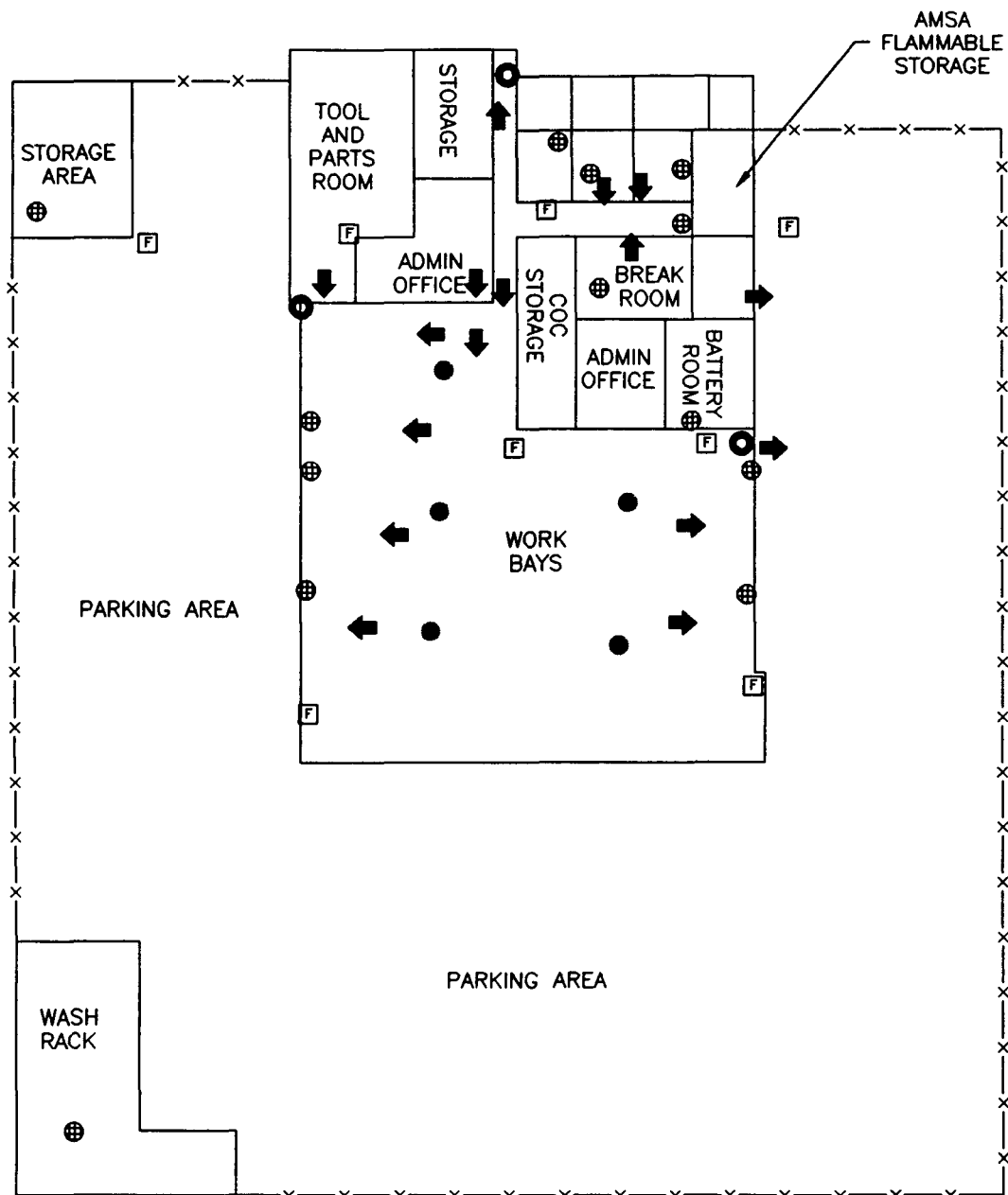
AHS 172



<b>Immediate Spill Response Emergency Action Plan</b>			
<b>Building 1722: AMSA-7</b>			
<b>WARNING:</b> Designated personnel at this facility have been specifically tasked, trained, and equipped to respond to oil and hazardous substance spills. Unauthorized individuals shall never undertake the response or investigation to any actual or suspected oil or hazardous substance spills			
<b>I. IMMEDIATELY REPORT</b> spills by the most expeditious means (e.g., voice, telephone) to your supervisor, or contact the <b>FACILITY EMERGENCY COORDINATOR</b> as listed below:			
<b>Facility Emergency Coordinator</b>	<b>Shop</b>	<b>Title</b>	<b>Phone Ext.</b>
H.O. Bidwell	AMSA	HW Coordinator	1407
IF CONTACT CANNOT BE MADE WITH THE FACILITY EMERGENCY COORDINATOR, REPORT SPILLS IMMEDIATELY to:  <b>FIRE DEPARTMENT EXT. 3333</b>  Number of Persons Working at this site: 10			
<b>II. FIRE SAFETY PLAN</b>			
<b>A. Equipment</b>			
The building is equipped with an automatically or manually activated sprinkler system and heat and smoke detectors. Fire extinguishers and alarms are throughout the facility with fire extinguishers approximately 50 feet apart in the garage, and at each building exit. Emergency response is initiated by telephone.			
<b>B. Building Construction/Activity Description</b>			
This facility is of concrete block and precast concrete construction and houses office and garage areas. The facility serves as a auto/vehicle maintenance center for base personnel. The facility is on NAS Drive.			

<b>Immediate Spill Response Emergency Action Plan</b>	
<b>Building 1722: AMSA-7</b>	
<b>III.</b>	<b>SITE HAZARDOUS SUBSTANCE INFORMATION</b>
<b>A.</b>	<b>Inventory</b>
<p>This activities performed in this facility require the handling and use of hazardous materials, all materials are maintained in daily-use qualities except some petroleum products and lubricants. Table ANNEX 1 - 12.0, Typical Site Inventory: AMSA-7.</p>	
<b>B.</b>	<b>Probable Spill Route</b>
<p>The following spill scenario was identified as most likely at the AMSA-7:</p> <p><u>Spill Of Hazardous Substance Inside the Building:</u></p> <p>The specific materials used and stored in this facility are clearly identified by appropriate labeling. The maximum spill potential for this site is approximately 55 gallons. All floor drains within this facility are covered to prevent drainage of petroleum products. Otherwise, hazardous materials, oils, and lubricants are controlled using absorbents and drip pans. All loading and unloading operations occur within the building proper.</p>	
<b>C.</b>	<b>Spill Response Equipment and Materials</b>
<p>This facility is equipped with a spill kit.</p>	

Last updated: ~~November 1994~~



#### LEGEND

- - FIRE ALARM
- [F] - FIRE EXTINGUISHER
- ➔ - EXIT
- ⊕ - DRAIN (OPEN)
- - DRAIN (CLOSED)
- x- - FENCE



NAS CORPUS CHRISTI  
OHS CONTINGENCY PLAN

BUILDING 1722  
AMSA-7  
SITE PLAN

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**List ANNEX 1 - 12.0**  
**AMSA - 7:**  
**Hazardous Substance Inventory**  
Last updated: November 1994

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# PROCESS MATERIALS

DEPARTMENT:  
WORK CENTER/SHOP NAME: AMSA-7 (G)

PROCESS DESCRIPTION:  
BASE PROCESS ID#: AMSA7-01

MATERIAL NAME	PART NUMBER	FEDERAL STOCK NUMBER	UNIT OF ISSUE	UNITS CONSUMED
HYDRAULIC FLUID AUTOMATIC DEXTRON	TYPE II	9150-00-657-4959	5 GL	12 GL
LUB OIL ENGINE OE-HDO-10	MIL-L-2104D	9150-00-191-2772	55 GL	25 GL
LUB OIL ENGINE QE-HDO-30	MIL-L-2104E	9150-00-189-6729	33 GL	75 GL
HYDRAULIC FLUID DEXTRON	TYPE II	9150-00-698-2382	1 QT	12 QT
LUB OIL GEAR GO 80-90W	MIL-L-2105D	9150-01-035-5394	55 GL	14 GL
PENETRATING FLUID	GS-07F-50606	6850-00-973-9091	12 OZ CN	3 CN
WD-40 LUBRICANT	42110		12 OZ CAN	6 CN
LINSEED OIL BOILED	GS-105-45737	8110-00-152-3245	1 GL	1 GL
GREASE AUTOMOTIVE	MIL-G-10924D	9150-00-530-7369	120 LB DR	35 LB
HIGHIMPACT LUBRICANT	EP-65		125 LB DR	5 LB
PENNZOIL BEARING GREASE	NLGI#2		5 LB CN	40 LB
FLAKE GRAPHITE		9620-00-204-2643	1 LB CN	1 CN
LUB COMPOUND DIMETHLSILICONE		9150-00-823-7860	16 OZ CN	4 CN
GRAPHETE DRY LUBE		9620-00-233-6712	1 LB CN	1 CN
SILCO WHITE LUKE LITHIUM	14A		1 PT CN	1 CN
NAPA LUB DRY GRAPHITE			1/4 OZ TU	3 TU
ZIPPER EASE LUB		9150-00-999-7548	3 OZ TY	2 TU

# PROCESS MATERIALS.

DEPARTMENT:

WORK CENTER/SHOP NAME: AMSA 7 (G)

PROCESS DESCRIPTION:

BASE PROCESS ID#: AMSA7-01

MATERIAL NAME	PART NUMBER	FEDERAL STOCK NUMBER	UNIT..OF ISSUE	UNITS CONSUME
WALKWAY COMPOUND NON SLIP	TQ-GS-085-36131	5610-00-141-7838	1 GL	1 GL
CAMOUFLAGE PAINT ENAMEL ALKYD	GS-105-44290	8010-00-111-7930	1 GL	2 GL
CAMOUFLAGE PAINT ENAMEL ALKYD	MIL-E-52798A	8010-00-120-8283	1 GL	4 GL
CAMOUFLAGE PAINT ENAMEL ALKYD	MIL-E-52798A (ME)	8010-00-111-7988	1 GL	1 GL
CAMOUFLAGE PAINT ENAMEL ALKYD	900D001 QPL TB-14	8010-00-111-8005	1 GL	2 GL
CAMOUFLAGE PAINT ENAMEL ALKYD	900H008 QPL-TB-17	8010-00-111-7989	1 GL	1 GL
PAINT WHITE LACQUER	TC-GS-10F-46124	8010-00-584-3150	1 PT CN	3 CN
PAINT GRAY LACQUER	GS-10F-50606	8010-00-616-9144	1 PT CN	2 CN
PAINT YELLOW LACQUER	DAL 1661		1 PT CN	2 CN
PAINT GREEN LACQUER	7738		1 PT CN	1 CN
PAINT RED LACQUER	TT-E-001384	8010-00-159-4519	1 PT CN	1 CN
PAINT RED ENAMEL	7803		1 PT CN	1 CN
PAINT RED LACQUER	1641		1 PT CN	1 CN
PAINT BATTERY PROTECTION	1307		1 PT CN	6 CN
PAINT PRIMER GRAY	36231	8010-00-687-8191	1 GL CN	1 GL
PAINT ENAMEL YELLOW	13538	8010-00-527-2045	1 GL CN	1 GL
SOLVENT DRY CLEANING	PD-680	6850-00-285-8011	55 GL DR	45 GL

Enclosure (4)

# PROCESS MATERIALS

DEPARTMENT:  
WORK CENTER/SHOP NAME: AMSA 7 (G)

PROCESS DESCRIPTION:  
BASE PROCESS ID#: AMSA7-01

MATERIAL NAME	PART NUMBER	FEDERAL STOCK NUMBER	UNIT..OF ISSUE	UNITS CONSUMED
CLEANING COMPOUND SOLVENT		6850-00-105-3084	13 OZ CN	3 CN
CLEANING COMPOUND BRAKE-FREE	MIL-L-63460B	9150-01-053-6688	1 GL	2 GL
TRUFLEX XC RAOIB CLEAN		2640-00-138-8324	1 CN	1 CN
EZ LIQUID PREBUFF	LB-100-EZ		1 QT CN	1 CN
NAPA LIQUID BUFFER	765-1322		1 QT CN	1 CN
CLEANING COMPOUND WINDSHIELD		6850-00-926-2275	1 PT CN	1 CN
CLEANING CREAM WATERLESS			1 LB JR	6 JR
DLA HAND CLEANER	DLA-06		1 LB CN	6 CN
HAND CLEANER		8520-00-082-2146	1 LB CN	3 CN
HAND CLEANER GO JO		8520-01-064-2725	4.5 LB CN	6 CN
AMAZON TOILET SOAP		8520-00-228-0598	1 GL	1 GL
DUPONT AUTO POLISH			1 PT CN	1 CN
KRESTOEF HAND CLEANER	87044		67 FL OZ	8 CN
BRAKE FLUID SILICONE	DLA400-84-F182	9150-01-102-9455	1 GL	16 GL
ANTIFREEZE ETHYLENE GLYCOL		6850-00-181-7933	5 GL CN	2 CN
ANTIFREEZE ETHYLENE CLYCOL		6850-00-181-7940	55 GL DR	1 DR
RADI-AIDER ALKALINITY TESTER		6630-01-011-5039	12 OZ BT	2 BT

Enclosure (4)

# PROCESS MATERIALS

DEPARTMENT:  
WORK CENTER/SHOP NAME: AMSA-7 (G)

PROCESS DESCRIPTION: AMSA-7 (G)  
BASE PROCESS ID#: AMSA7-01

MATERIAL NAME	PART NUMBER	FEDERAL STOCK NUMBER	UNIT OF ISSUE	UNITS CONSUMED
INHIBITOR CORROSION LIQUID		6850-01-160-3868	QT CN.	15 CN
J-B WELD EZPOXY	8265-S		6 OZ TU	2 TU
ADHESIVE, GLUE	1276	8040-00-221-3813	12 OZ TU	1 TU
RTV SILICONE RUBBER	RTV102	8040-00-833-9563	12 OZ TU	4 TU
FORM-A-GASKET	765-1207		12 OZ TU	2 TU
DURO CLEAN WINDSHIELD	DWS-37		12 OZ TU	8 TU
EPE SEAL SPEC 20-20	MMM-A-1754	8040-00-944-7292	6 OZ TU	2 TU
FORM-A-GASKET	765-1210		12 OZ TU	2 TU
LOCITE 242 THREADLOCK	24200		4 OZ TU	1 TU
PERMATEX SEALANT	1C		6 OZ TU	2 TU
K&W COPPER COAT	1516		12 OZ CN	1 CN
PATCH CEMENT			8 OZ CN	1 CN
PATCH CEMENT	765-1198		12 OZ CN	1 CN
BONDING COMPOUND	M-24	4910-00-922-6919	QT CN	1 CN
RTV SILICONE	80627		6 OZ TU	1 TU
PERMATEX SEALANT TEFLON	14A		QT CN	1 CN
SILICONE SEALANT WINDSHIELD			6 OZ TU	2 TU

Enclosure (4)

# PROCESS MATERIALS

DEPARTMENT:

WORK CENTER/SHOP NAME:AMSA-7 (G)

PROCESS DESCRIPTION:

BASE PROCESS ID#: AMSA7-01

MATERIAL NAME	PART NUMBER	FEDERAL STOCK NUMBER	UNIT OF ISSUE	UNITS CONSUMED
SEALING COMPOUND	TYPE III	8030-00-656-1426	PT CN	1 CN
ADHESIVE CYANOACRYLATE	MIL-A-4605DC	8040-00-142-9193	12 OZ TU	2 TU
ADHESIVE SPRAY	GS06F13254	8040-00-938-6860	18 OZ CN	1 CN
BELT DRESSING	765-1397		13 OZ CN	1 CN
GASOLINE	UNLEADED		1 GL	80 GL
DIESEL	TYPE II		1 GL	40 GL
OSPHO ACID			1 GL	1 GL
OXGEN	2265.0	8120-00-357-7992	CYL	2 CY
ACETYLENE	220	8120-00-268-3357	CYL	2 CY
BRAZING FLUX	NO 2		12 CN	1 CN
ACID CORE SOLDER	770-2670	3439-00-188-6986	5 LB RL	2 RL
SOLDER ROSIN CORE		3439-00-269-9610	1 LB RL	2 RL
PROPANE		6830-00-584-3041	CYL	2 CYL
ELECTROLYTE ACID		6810-00-839-8138	15 GL BT	2 BT
BATTERY WATER		6810-00-297-9540	5 GL BT	2 BT
SODIUM CARBONATE		6810-00-262-8567	25 LB CN	1 CN
ELECTROYTE ACID			5 GL BT	2 BT

Enclosure (4)

# PROCESS MATERIALS

DEPARTMENT:

WORK CENTER/SHOP NAME: AMSA-7 (G)

PROCESS DESCRIPTION:

BASE PROCESS ID#: AMSA7-01

MATERIAL NAME	PART NUMBER	FEDERAL STOCK NUMBER	UNIT-OF ISSUE	UNITS CONSUMED
MARSON AUTOBODY FILLER	01152		1 QT CN	4 QT
FILLER AUTOBODY		8010-00-926-2135	1 GL CN	1 CN
CUZ CREAM HARDNER	6372T		12 OZ TU	4 TU
CREAM FILLER	DX-672		12 OZ TU	4 TU
WATER INDICATING PASTE	MIL-W-85779	6850-00-001-4193	2.5 OZ JR	1 JR
KOLOR KUT WATER FINDING			3 OZ RU	1 TU
LEAK DETECTOR PNEU	M-40	4910-00-922-6919	12 OZ CN	1 CN
INK, STAMP		7510-00-161-4240	2 OZ	1 BT
INK, STAMP		7510-00-161-4240	2 OZ	1 BT
ROLL-ON STAMP	587		2 OZ	1 BT
INSECT REPELLANT	IIA	6840-00-753-4963	2 OZ BT	3 BT

Enclosure (4)

## **GENERIC RESPONSES TO HAZARDOUS SUBSTANCE INCIDENTS**

The following generic responses to hazardous substance incidents can assist emergency responders in making decisions, but the emergency responders cannot consider these generic response guidelines to be a substitute for their knowledge or judgment. This distinction is important since the recommendations in the guidelines are those most likely to apply in a majority of cases, but may not be adequate or applicable in all cases. These guidelines were primarily designed for use at a hazardous substance incidents occurring on a highway or a railroad. The guidelines will, with certain limitations, be useful in handling incidents in other modes of transportation and at transportation facilities such as terminals and warehouses.

As an emergency responder at the scene of a hazardous substance incident, seek additional and more specific information about any material in question as soon as possible. These guidelines are not intended for use during the cleanup phase of spilled materials, nor should they be used to determine compliance with any regulations. Become familiar with these guidelines before you actually need to use them in an emergency response. To obtain additional assistance for the most effective handling of a hazardous substance incident call, as soon as possible, **CHEMTREC at 1-800- 424-9300** or contact one or more of the other technical resources listed in Table ERAP B.1.

## **EXPLOSIVES AND BLASTING AGENTS — UN Class 1.1, 1.2, 1.3, 1.5, or 1.6**

### **POTENTIAL HAZARDS**

May explode and throw fragments 1 mile or more if fire reaches explosives. Fire may produce irritating or poisonous gases.

### **EMERGENCY ACTION**

#### **Fire**

**DO NOT FIGHT A FIRE IF IT HAS REACHED THE EXPLOSIVE CARGO COMPARTMENT, WITHDRAW AND LET THE FIRE BURN.**

If you know or suspect that heavily encased explosives, such as bombs or artillery projectiles are involved, stop all traffic and begin to evacuate all persons, including emergency responders, from the area in all directions for 5000 feet (1 mile) for railcars or 4,000 feet ( $\frac{3}{4}$  mile) for tractor/trailer. When heavily encased explosives are not involved, evacuate the area for 2,500 feet ( $\frac{1}{2}$  mile) in all directions.

Positive pressure, self-contained breathing apparatus (SCBA) and structural firefighter's protective clothing will provide limited protection.

Try to prevent fire from reaching the explosive cargo compartment. Flood the compartment/area with water; if no water is available use CO<sub>2</sub>, dry chemical, or soil.

Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. First, move people out of line-of-sight of the scene and away from windows. Then, obtain more information and specific guidance from competent authorities listed on the shipping papers.

#### **Spill or Leak**

Shut off ignition sources; no flares, smoking, or open flames are permitted in the hazard area. Do not touch or walk through any spilled material.

#### **First Aid**

Call emergency medical care.

Use first-aid treatment according to the nature of the injury.

## **EXPLOSIVES — UN Class 1.4**

### **POTENTIAL HAZARDS**

May explode and throw fragments  $\frac{2}{3}$  mile or more if fire reaches explosives. Fire may produce irritating or poisonous gases.

### **EMERGENCY ACTION**

#### **Fire**

**DO NOT FIGHT A FIRE IF IT HAS REACHED THE EXPLOSIVE CARGO COMPARTMENT, WITHDRAW AND LET THE FIRE BURN.**

Stop all traffic and begin to evacuate all persons, including emergency responders, from the area in all directions for 1,500 feet ( $\frac{1}{2}$  mile) in all directions.

Positive pressure, SCBA and structural firefighter's protective clothing will provide limited protection.

Try to prevent fire from reaching the explosive cargo compartment. Flood the compartment/area with water; if no water is available use CO<sub>2</sub>, dry chemical, or soil.

Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. First, move people out of line-of-sight of the scene and away from windows. Then, obtain more information and specific guidance from competent authorities listed on the shipping papers.

#### **Spill or Leak**

Shut off ignition sources; no flares, smoking, or open flames are permitted in the hazard area. Do not touch or walk through any spilled material.

#### **First Aid**

Call emergency medical care.

Use first-aid treatment according to the nature of the injury.

## **FLAMMABLE COMPRESSED GASES — UN Class 2.1**

### **POTENTIAL HAZARDS**

Extremely flammable; may be ignited by heat, sparks, or flames. Vapors may travel to an ignition source and flash back to the container. Container may explode due to heat from a fire. Gases present a vapor explosion hazard indoors, outdoors, and in sewers.

Vapors may cause dizziness or suffocation. Contact of gas on skin will cause severe frostbite. Fire may produce irritating or poisonous gases.

### **EMERGENCY ACTION**

#### **Fire**

Keep unnecessary people away; isolate hazard area and deny entry. Stay upwind, out of low areas, and ventilate closed spaces before entering. Positive pressure, SCBA and structural firefighters' protective clothing will provide limited protection.

**Isolate the area for ½ mile in all directions if a tank, railcar, or tank truck is involved in a fire.**

Let a tank, tank car, or tank truck burn unless the gas leak can be stopped without endangering personnel. With smaller tanks or cylinders, extinguish fire and isolate the container from other flammable materials.

Use dry chemicals or CO<sub>2</sub> to extinguish small fires and water spray or fog for large fires.

Move gas containers away from the fire area if this can be done without endangering personnel. Apply cooling water to sides of containers that are exposed to flames until well after the fire is out. Stay away from the ends of tanks. For a massive fire in a cargo area, use unmanned hose holders or monitor nozzles. If this is impossible, withdraw from the area and let the fire burn. Withdraw immediately in case of a rising sound from venting safety devices or upon any discoloration of the tank due to exposure to the fire.

#### **Spill or Leak**

Shut off ignition sources; no flares, smoking, or open flames are permitted in the hazard area. Do not touch or walk through any spilled material. Stop the leak if this can be done without endangering personnel.

#### **First Aid**

Move the victim to fresh air and call emergency medical care. If the victim is not breathing, give artificial respiration. If the victim's breathing is difficult, give oxygen (if qualified to perform this procedure). In case of frostbite, thaw the victim's frosted parts with water. Keep the victim quiet and maintain normal body temperature.

## **NONFLAMMABLE, NONTOXIC COMPRESSED GASES — UN Class 2.2**

### **POTENTIAL HAZARDS**

Cylinders may explode in a fire.

Vapors may cause dizziness or suffocation. Contact of gas on skin will cause severe frostbite.

### **EMERGENCY ACTION**

#### **Fire**

Keep unnecessary people away; isolate hazard area and deny entry. Stay upwind, out of low areas, and ventilate closed spaces before entering. Positive pressure, SCBA and structural firefighters' protective clothing will provide limited protection.

Isolate the area for ½ mile in all directions if a tank, railcar, or tank truck is involved in a fire.

Use dry chemicals or CO<sub>2</sub> to extinguish small fires and water spray or fog for large fires.

Move gas containers away from the fire area if this can be done without endangering personnel. Apply cooling water to sides of containers that are exposed to flames until well after the fire is out. Stay away from the ends of tanks. For a massive fire in a cargo area, use unmanned hose holders or monitor nozzles. If this is impossible, withdraw from the area and let the fire burn. Withdraw immediately in case of a rising sound from venting safety devices or upon any discoloration of the tank due to exposure to the fire.

#### **Spill or Leak**

Do not touch or walk through any spilled material. Stop the leak if this can be done without endangering personnel.

#### **First Aid**

Move the victim to fresh air and call emergency medical care. If the victim is not breathing, give artificial respiration. If the victim's breathing is difficult, give oxygen (if qualified to perform this procedure). In case of frostbite, thaw the victim's frosted parts with water. Keep the victim quiet and maintain normal body temperature.

## **POISONOUS COMPRESSED GASES — UN Class 2.3**

### **POTENTIAL HAZARDS**

Poisonous; may be fatal if inhaled or absorbed through the skin. Contact with the gas may burn the skin and eyes. Contact with liquefied gas will cause frostbite. Any clothing that is frozen to the skin should be thawed before attempting to remove it. Runoff from fire control or dilution water may cause pollution.

Some of these materials may burn, but none of them ignites readily. Cylinders may explode in a fire.

### **EMERGENCY ACTION**

#### **Fire**

Keep unnecessary people away; isolate hazard area and deny entry. Stay upwind, out of low areas, and ventilate closed spaces before entering. Positive pressure, SCBA and chemical protective clothing that is specifically recommended by the shipper or manufacturer may be worn. The protective clothing may provide little or no thermal protection. Structural firefighters' protective clothing is **NOT** effective for these materials.

**Isolate the area the immediate area and all adjacent downwind buildings/structures. Contact the manufacturer or Material Safety Data Sheets (MSDS) to determine the size of the isolation zone.**

Use dry chemicals or CO<sub>2</sub> to extinguish small fires and water spray, fog, or regular foam for large fires. **Do not get water inside containers.**

Move gas containers away from the fire area if this can be done without endangering personnel. Apply cooling water to sides of containers that are exposed to flames until well after the fire is out. Stay away from the ends of tanks. For a massive fire in a cargo area, use unmanned hose holders or monitor nozzles. If this is impossible, withdraw from the area and let the fire burn. Withdraw immediately in case of a rising sound from venting safety devices or upon any discoloration of the tank due to exposure to the fire.

Isolate the fire area until all gas has dispersed.

#### **Spill or Leak**

Do not touch or walk through any spilled material. Stop the leak if this can be done without endangering personnel. Fully-encapsulating, vapor-protective clothing should be worn for spills and leaks with no fire.

Use water spray to reduce vapor. **Do not put water directly on leak or spill area.**

#### **First Aid**

Move the victim to fresh air and call emergency medical care. If the victim is not breathing, give artificial respiration. If the victim's breathing is difficult, give oxygen (if qualified to perform this procedure). In case of contact with material, immediately flush skin or eyes with running water for at least 15 minutes. In case of frostbite, thaw the victim's frosted parts with water. Keep the victim quiet and maintain normal body temperature. Effects may be delayed. Keep the victim under observation.

## **FLAMMABLE LIQUIDS — UN Class 3**

### **POTENTIAL HAZARDS**

Flammable and combustible liquids that may be ignited by heat, sparks, or flames. Vapors may travel to a source of ignition and flash back. Containers may explode in the heat of a fire. Liquids present a vapor explosion hazard indoors, outdoors, or in sewers. Runoff to sewer may create a fire or explosion hazard.

Some of these materials may be poisonous if the vapors are inhaled or the liquid is absorbed through the skin. Vapors may cause dizziness or suffocation. Contact with the liquid may irritate or burn the skin and eyes. Fire may produce irritating or poisonous gases. Runoff from fire control or dilution water may cause pollution.

### **EMERGENCY ACTION**

#### **Fire**

Keep unnecessary people away; isolate hazard area and deny entry. Stay upwind, out of low areas, and ventilate closed spaces before entering. Positive pressure, SCBA and structural firefighters' protective clothing will provide limited protection.

**Isolate the area for ½ mile in all directions if a tank, railcar, or tank truck is involved in a fire.**

Use dry chemicals, CO<sub>2</sub>, water spray, or regular foam to extinguish small fires and water spray, fog, or regular foam for large fires.

Move liquid containers away from the fire area if this can be done without endangering personnel. Apply cooling water to sides of containers that are exposed to flames until well after the fire is out. Stay away from the ends of tanks. For a massive fire in a cargo area, use unmanned hose holders or monitor nozzles. If this is impossible, withdraw from the area and let the fire burn. Withdraw immediately in case of a rising sound from venting safety devices or upon any discoloration of the tank due to exposure to the fire.

#### **Spill or Leak**

Shut off ignition sources; no flares, smoking, or open flames are permitted in the hazard area. Do not touch or walk through any spilled material. Stop the leak if this can be done without endangering personnel. Absorb small spills with sand or other noncombustible absorbent material and place into containers for later disposal. Dike far ahead of a large spill and collect the liquid for later disposal.

#### **First Aid**

Move the victim to fresh air and call emergency medical care. If the victim is not breathing, give artificial respiration. If the victim's breathing is difficult, give oxygen (if qualified to perform this procedure). In case of contact with a liquid, immediately flush eyes with running water for at least 15 minutes. Wash skin with soap and water. Remove and isolate contaminated clothing and shoes.

## **FLAMMABLE SOLIDS — UN Class 4.1**

### **POTENTIAL HAZARDS**

Flammable and combustible solids that may be ignited by heat, sparks, or flames. Materials may burn rapidly with flare-burning effect.

Fire may produce irritating or poisonous gases. Contact with these materials may burn the skin and eyes. Runoff from fire control or dilution water may cause pollution.

### **EMERGENCY ACTION**

#### **Fire**

Keep unnecessary people away; isolate hazard area and deny entry. Stay upwind and keep out of low areas. Positive pressure, SCBA and structural firefighters' protective clothing will provide limited protection.

Use dry chemicals, sand, soil, water spray, or regular foam to extinguish small fires and water spray, fog, or regular foam for large fires.

Move containers of solid materials away from the fire area if this can be done without endangering personnel. Apply cooling water to sides of containers that are exposed to flames until well after the fire is out. Stay away from the ends of tanks. For a massive fire in a cargo area, use unmanned hose holders or monitor nozzles. If this is impossible, withdraw from the area and let the fire burn. Withdraw immediately in case of a rising sound from venting safety devices or upon any discoloration of the tank due to exposure to the fire.

Use dry sand, Met-L-X® powder, or G-1 graphite powder to extinguish fires involving magnesium.

#### **Spill or Leak**

Shut off ignition sources; no flares, smoking, or open flames are permitted in the hazard area. Do not touch or walk through any spilled material. Recover spilled material with a clean shovel and place into a clean, dry container. Cover the container loosely and store for disposal.

#### **First Aid**

Move the victim to fresh air and call emergency medical care. In case of contact with the material, immediately flush eyes with running water for at least 15 minutes. Removing solidified molten material from skin requires medical assistance. Remove and isolate contaminated clothing and shoes.

## **SPONTANEOUSLY COMBUSTIBLE MATERIAL — UN Class 4.2**

### **POTENTIAL HAZARDS**

Materials are poisonous if swallowed. Inhaling dusts from these materials is poisonous.

Fire may produce irritating or poisonous gases. Runoff from fire control or dilution water may cause pollution.

### **EMERGENCY ACTION**

#### **Fire**

Keep unnecessary people away; isolate hazard area and deny entry. Stay upwind and keep out of low areas. Positive pressure, SCBA and structural firefighters' protective clothing will provide limited protection.

**ONLY USE WATER** to extinguish fires involving these materials. For large fires, flood the fire area with water from a distance.

Move containers of these materials away from the fire area if this can be done without endangering personnel. Apply cooling water to sides of containers that are exposed to flames until well after the fire is out. Stay away from the ends of tanks. For a massive fire in a cargo area, use unmanned hose holders or monitor nozzles. If this is impossible, withdraw from the area and let the fire burn.

#### **Spill or Leak**

Do not touch or walk through any spilled material. Keep combustibles (wood, paper, oil, etc.) away from the spilled material. Recover spilled material with a clean shovel and place into a clean, dry container. Cover the container loosely and store for disposal.

#### **First Aid**

Move the victim to fresh air and call emergency medical care. In case of contact with the material, immediately flush eyes with running water for at least 15 minutes. Remove and isolate contaminated clothing and shoes.

## **DANGEROUS-WHEN-WET MATERIALS — UN Class 4.3**

### **POTENTIAL HAZARDS**

Materials may ignite if exposed to air. The material may reignite after the fire is extinguished. Materials may ignite in the presence of moisture. A violent reaction may occur if exposed to water. The reaction may produce flammable gas. Runoff to the sewer may create a fire or explosion hazard. Materials may be poisonous if inhaled. Contact of the material to the skin and eyes may cause burns. Fire may produce irritating or poisonous gases.

### **EMERGENCY ACTION**

#### **Fire**

Keep unnecessary people away; isolate hazard area and deny entry. Stay upwind and keep out of low areas. Positive pressure, SCBA and structural firefighters' protective clothing will provide limited protection.

**DO NOT USE WATER or FOAM** to extinguish fires involving these materials. Use dry chemical, soda ash, lime, or sand to extinguish small fires. Withdraw from an area involving a large fire of this type of material and let the fire burn.

Use dry sand, Lith-X® powder, or G-1 graphite powder to extinguish fires involving lithium.

Move containers away from the fire area if this can be accomplished without endangering personnel.

#### **Spill or Leak**

Shut off ignition sources, no flares, smoking, or flames are permitted in the hazard area. Do not touch or walk through any spilled material. Recover spilled material with a clean shovel and place into a clean, dry container. Cover the container loosely and store for disposal. If the spill is a liquid, absorb with sand or other noncombustible material and place into containers for later disposal.

#### **First Aid**

Move the victim to fresh air and call emergency medical care. In case of contact with the material, immediately flush eyes with running water for at least 15 minutes. Remove and isolate contaminated clothing and shoes.

## **OXIDIZING MATERIALS — UN Class 5.1**

### **POTENTIAL HAZARDS**

These materials may ignite other combustible materials (wood, paper, oil, etc.). These materials will accelerate burning when they are involved in a fire. Some of these materials will react violently with fuels. Runoff into a sewer may create a fire or explosion hazard. Contact between these materials and the skin and eyes may cause burns. Vapors and dusts from these materials may be irritating. Fires involving these materials may produce irritating or poisonous gases. Runoff from fire control or dilution water may cause pollution.

### **EMERGENCY ACTION**

#### **Fire**

Keep unnecessary people away; isolate hazard area and deny entry. Stay upwind and keep out of low areas. Positive pressure, SCBA and structural firefighters' protective clothing will provide limited protection.

**USE ONLY WATER** to extinguish small fires involving these materials. Flood a large fire area with large quantities of water. Water should be applied to large fires from a distance. Move containers from the fire area if this can be accomplished without endangering personnel. Apply cooling water to the sides of containers that are exposed to flames until well after the fire is out. For a massive fire in a cargo area, use unmanned hose holders or monitor nozzles to fight the fire. If this is impossible, withdraw from the area involving the fire and let the fire burn.

#### **Spill or Leak**

Do not touch or walk through any spilled material. Keep combustible materials (wood, paper, oil, etc.) away from the area. Recover spilled material with a clean shovel and place into a clean, dry container. Cover the container loosely and store for disposal. If the spill is a liquid, absorb with sand or other noncombustible material and place into containers for later disposal.

#### **First Aid**

Move the victim to fresh air and call emergency medical care. In case of contact with the material, immediately flush eyes with running water for at least 15 minutes. Remove and isolate contaminated clothing and shoes.

## **ORGANIC PEROXIDES — UN Class 5.2**

### **POTENTIAL HAZARDS**

These materials may self-ignite if exposed to air. These materials may be ignited by heat, sparks, or flames. Organic peroxides burn rapidly with a flaring burning effect. These materials may explode from heat, contamination, or loss of temperature. Contact between these materials and skin and eyes may cause burns. Fires involving these materials may produce irritating or poisonous gases. Runoff from fire control or dilution water may cause pollution.

### **EMERGENCY ACTION**

#### **Fire**

Keep unnecessary people away; isolate hazard area and deny entry. Stay upwind and keep out of low areas. Positive pressure, SCBA and structural firefighters' protective clothing will provide limited protection.

Use dry chemical, CO<sub>2</sub>, water spray, or regular foam to extinguish small fires involving these materials. Flood a large fire area with large quantities of water. Water should be applied to large fires from a distance. For a massive fire in a cargo area, use unmanned hose holders or monitor nozzles to fight the fire. If this is impossible, withdraw from the area involving the fire and let the fire burn.

#### **Spill or Leak**

Do not touch or walk through any spilled material. Keep combustible materials (wood, paper, oil, etc.) away from the area. Absorb spilled material with sand or other noncombustible material. Move containers from the spill area.

#### **First Aid**

Move the victim to fresh air and call emergency medical care. In case of contact with the material, immediately flush eyes with running water for at least 15 minutes. Wash contaminated skin with soap and water. Remove and isolate contaminated clothing and shoes. Keep victim quiet and maintain normal body temperature.

## POISONOUS LIQUID — UN Class 6.1

### POTENTIAL HAZARDS

These materials are poisonous. They may be fatal if inhaled, ingested, or absorbed through the skin. Contact between these materials and skin and eyes may cause burns. Contact with some of these liquids may cause frostbite. Clothing that is frozen to the skin should be thawed before being removed. Runoff from fire control or dilution water may cause pollution.

### EMERGENCY ACTION

#### Fire

Keep unnecessary people away; isolate hazard area and deny entry. Stay upwind and keep out of low areas. Positive pressure, SCBA and chemical-protective clothing which is specifically recommended by the shipper or manufacturer may be worn. This protective clothing will provide little or no thermal protection. Structural firefighters' protective clothing is **NOT EFFECTIVE** for these materials. Isolate the leak or spill area immediately for at least 150 feet in all directions. A larger area may need to be isolated. Consult the shipper or manufacturer to assist in making this determination.

Use dry chemical or CO<sub>2</sub> to extinguish small fires involving these materials. Use water spray, fog, or regular foam on larger fires. **DO NOT GET WATER INSIDE OF CONTAINERS.** Move containers away from the fire area if this can be accomplished without endangering personnel. Apply cooling water to the sides of containers that are exposed to flames until well after the fire is out. Stay away from the ends of tanks.

#### Spill or Leak

Stop the leak if this can be accomplished without endangering personnel. Do not touch or walk through any spilled material. Fully encapsulating, vapor-protective clothing should be worn for spills and leaks when no fire is involved. Use water spray to reduce vapors, but **do not** put water directly on the leak or spill area. Flush the area with flooding amounts of water. Dike the area far ahead of the liquid spill and contain for later disposal. Do not get water inside the poisonous liquid container. Isolate the area until all vapors have dispersed.

#### First Aid

Move the victim to fresh air and call emergency medical care. If the victim is not breathing, provide artificial respiration. If the victim's breathing is difficult, provide oxygen (if qualified to administer this procedure). In case of contact with the material, immediately flush skin and eyes with running water for at least 15 minutes. Remove and isolate contaminated clothing and shoes. Keep victim quiet and maintain normal body temperature. Effects of exposure to these materials may be delayed; therefore, keep the victim under observation.

## **POISONOUS SOLIDS — UN Class 6.1**

### **POTENTIAL HAZARDS**

These materials are poisonous if swallowed or dusts are inhaled. Contact with some of these liquids may cause frostbite. Fires involving these materials may produce irritating or poisonous gases. Runoff from fire control or dilution water may cause pollution. Some of these materials may burn, but none of them ignites readily.

### **EMERGENCY ACTION**

#### **Fire**

Keep unnecessary people away; isolate hazard area and deny entry. Stay upwind and keep out of low areas. Positive pressure, SCBA and structural firefighters' protective clothing will provide limited protection.

Use dry chemical, CO<sub>2</sub>, water spray, or regular foam to extinguish small fires involving these materials. Use water spray, fog, or regular foam on larger fires. Move containers away from the fire area if this can be accomplished without endangering personnel.

#### **Spill or Leak**

Do not touch or walk through any spilled material. Stop the leak if this can be accomplished without endangering personnel. Use a clean shovel to recover spilled material. Place recovered material into a clean, dry container, cover loosely, and store for later disposal.

#### **First Aid**

Move the victim to fresh air and call emergency medical care. In case of contact with the material, immediately flush skin and eyes with running water for at least 15 minutes. Remove and isolate contaminated clothing and shoes.

## **INFECTIOUS SUBSTANCES — UN Class 6.2**

### **POTENTIAL HAZARDS**

These materials may be ignited if the carrier liquid is flammable. Contact with these materials may cause infection and disease. Runoff from fire control or dilution water may cause pollution.

### **EMERGENCY ACTION**

#### **Fire**

Keep unnecessary people away; isolate hazard area and deny entry.

Use dry chemical, soda ash, lime, or sand to extinguish fires involving these materials. Move containers away from the fire area if this can be accomplished without endangering personnel.

#### **Spill or Leak**

Damage to the outer container may not affect the primary inner container. If the inner container is damaged or leaking, cover the container with a damp towel or rag and keep wet with liquid bleach. Dike and contain all liquids for later disposal. **DO NOT APPLY WATER** to these materials unless directed to do so by the shipper or manufacturer. Clean up only under the supervision of an expert (person knowledgeable about the specific material).

#### **First Aid**

Move the victim to fresh air and call emergency medical care. In case of contact with the material, immediately flush eyes with running water for at least 15 minutes. Wash affected skin areas with soap and water. Remove and isolate contaminated clothing and shoes.

## **RADIOACTIVE MATERIAL — UN Class 7**

### **POTENTIAL HAZARDS**

There is external radiation hazard from unshielded radioactive material and an internal radiation hazard from inhalation, ingestion, or entry of radioactive material through breaks in the skin. The degree of hazard associated with radioactive material will vary greatly depending on the type and quantity of radioactive material present and the type of packaging used. Materials in Special Form or in Type B packagings are not expected to cause contamination in an accident. Some radioactive materials cannot be detected by commonly available instruments.

Some of these materials may burn, but none of them ignites readily. Radioactivity does not change flammability or other properties of the materials. Runoff from fire control or dilution water may cause pollution.

### **EMERGENCY ACTION**

Keep unnecessary people at least 150 feet upwind of the spill. Greater distances may be necessary for people downwind or if advised by radiation specialists. Isolate the hazard area and deny entry. Response actions may be performed before measuring the radiation, but entry to the incident site must be limited to as short a time as possible. Positive pressure, SCBA and structural firefighters' protective clothing will provide limited protection. Notify the National Response Center of the accident as soon as possible.

#### **Fire**

Use dry chemical, CO<sub>2</sub>, water spray, or regular foam to extinguish small fires. Large fires should be extinguished using water spray or fog in flooding amounts. For massive fires in cargo areas, use unmanned hose holders or monitor nozzles to fight the fire.

#### **Spill or Leak**

**DO NOT TOUCH DAMAGED CONTAINERS OR SPILLED MATERIALS.** Damage to outer containers may not affect primary inner container. Use sand, soil, or other noncombustible materials to absorb spilled materials.

#### **First Aid**

Use first-aid treatment according to the nature of the injury. Remove and isolate contaminated clothing and shoes if this can be accomplished without affecting the injury. Wrap the victim in a sheet or blanket before transporting. If there is no injury, remove and isolate contaminated clothing and shoes and have the victim shower with soap and water. Advise medical personnel that the victim may be contaminated with radioactive material.

## **CORROSIVE MATERIALS — UN Class 8**

### **POTENTIAL HAZARDS**

Contact with these materials burns the skin and eyes. Vapors from these materials may be harmful if inhaled. Fire may produce irritating or poisonous gases. Runoff from fire control or dilution water may cause pollution. Some of these materials may burn, but none of them ignites readily. Flammable/poisonous gases may accumulate in tanks and hopper cars. Some of these materials may ignite combustible materials (wood, paper, oil, etc.).

### **EMERGENCY ACTION**

Keep unnecessary people away from the spill, isolate the area, and deny entry to the spill site. Stay upwind and keep out of low-lying areas. Positive pressure, SCBA and structural firefighters' protective clothing will provide limited protection.

#### **Fire**

Some of these materials may react violently with water. Use dry chemical, CO<sub>2</sub>, water spray, or regular foam to extinguish a small fire. Use water spray, fog, or regular foam to extinguish large fires. Apply cooling water to sides of containers that are exposed to flames until well after the fire is out. Stay away from the end of tanks.

#### **Spill or Leak**

Do not touch or walk through spilled materials. Stop the leak if this can be accomplished without endangering personnel. Use sand or other noncombustible absorbent material to recover spilled material. Place recovered material into clean, dry containers and cover loosely. Dike far ahead of the liquid in large spills and contain the liquid for later disposal.

#### **First Aid**

Move the victim to fresh air. Call for emergency assistance immediately. In case of contact with spilled materials, immediately flush skin or eyes with running water for at least 15 minutes. Remove and isolate all contaminated clothing and shoes. Keep the victim quiet and maintain normal body temperature.

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## HAZARDOUS SUBSTANCE — COUNTERMEASURE MATRIX

The following countermeasure matrix has been generated to reference the recommended classes of mitigation agents for treating hazardous substances involved in spills near or into water courses. The chemicals are listed in alphabetical order in the first column. The second column contains the letter designation for the EPA toxicity classification. The toxicity ranges for these designations may be found in Table 1 below. The third column lists the density of the hazardous substance and the fourth column lists the physical form of the pure hazardous substance. The fourth column lists the density of the hazardous substance.

The fifth column is the P/C/D category. The P/C/D category details each hazardous substance's solubility, density, volatility, and ability to disperse in water. The eight P/C/D categories are:

- |    |     |   |                                |
|----|-----|---|--------------------------------|
| 1. | IVF | — | insoluble volatile floaters    |
| 2. | INF | — | insoluble nonvolatile floaters |
| 3. | IS  | — | insoluble sinkers              |
| 4. | SM  | — | soluble mixers                 |
| 5. | P   | — | precipitator                   |
| 6. | SS  | — | soluble sinker                 |
| 7. | SF  | — | soluble floater                |
| 8. | M   | — | miscible                       |

A complete definition of each category and the hazardous substances within each category are listed after the HAZARDOUS SUBSTANCE — COUNTERMEASURE MATRIX.

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**Table ANNEX 1.0**  
**Hazardous Substance Countermeasure Matrix**

Material	EPA Category	Density	Physical Form	P/C/D Category	Material Transfer Media			Neutralizing Agent		Precipitating Agent	Biological Treatment Agent	Gelling Agent	Absorbing Agent	Oxidizing Agent	Dispersing Agent
					Activated Carbon	Cationic Resin	Anionic Resin	Acid	Base						
Acetaldehyde	C	0.783	L	M	X				X			X	X		
• Acetic acid	C	1.049	L	M	X				X		X	X	X		
Acetic anhydride anhydride	C	10.83	L	SF	X				X		X	X	X		X
Acetone cyanohydrin	C	0.90	L	SF	X							X	X		X
Acetyl bromide	D	1.52	L	SS	X		X					X	X		X
Acetyl chloride	D	1.11	L	SS	X				X			X	X		
Acrolein	A	0.839	L	SF	X						X	X	X		X
Acrylonitrile	C	0.807	L	SF	X							X	X		X
Adiponitrile	D	0.95	L	SF	X							X	X		X
Aldrin	A	1.65	S	IS	X										
• Allyl alcohol	B	0.854	L	M	X						X	X	X		
Allyl chloride	C	0.9	L	IVF	X						X	X	X		X
Aluminum fluoride	D	2.88	S	P	X	X	X			X					
Aluminum sulfate	D	1.69	S	P	X					X					
• Ammonia	C	0.60	L	SF	X	X		X							
Ammonium acetate	D	1.073	S	SM	X	X									
Ammonium benzoate	D	1.26	S	SS	X	X	X								
Ammonium bicarbonate	D	1.58	S	SS	X	X									
Ammonium bichromate	D	2.15	S	SS	X	X	X			X					
Ammonium bifluoride	D	1.21	S	SS	X	X	X			X					

**Table ANNEX 1.0**  
**Hazardous Substance Countermeasure Matrix**

Material	EPA Category	Density	Physical Form	P/C/D Category	Material Transfer Media			Neutralizing Agent		Precipitating Agent	Biological Treatment Agent	Gelling Agent	Absorbing Agent	Oxidizing Agent	Dispersing Agent
					Activated Carbon	Cationic Resin	Anionic Resin	Acid	Base						
Ammonium bisulfite	D	—	S	SS	X	X									
Ammonium bromide	D	2.43	S	SS	X	X	X								
Ammonium carbamate	D	—	S	SS	X	X	X								
Ammonium carbonate	D	—	S	SM	X	X									
Ammonium chloride	D	1.53	S	SS	X	X									
Ammonium chromate	D	1.91	S	SS	X	X	X								
Ammonium citrate	D	—	S	SS	X	X									
Ammonium fluoborate	D	1.85	S	SS	X	X	X								
Ammonium fluoride	D	1.31	S	SM	X	X	X			X					
• Ammonium hydroxide	C	0.9	S/L	M	X	X		X				X			
Ammonium hypophosphite	D	—	S	SS	X	X									
Ammonium iodide	D	2.56	S	SM	X	X	X								
Ammonium nitrate	D	1.66	S	SM	X	X	X								
Ammonium oxalate	D	1.50	S	SS	X	X	X								
Ammonium pentaborate	D	—	S	SS	X	X	X								
Ammonium persulfate	D	1.98	S	SS	X	X									
Ammonium silicofluoride	C	2.01	S	SS	X	X	X								
Ammonium sulfamate	D	—	S	SM	X	X	X								
Ammonium sulfide	D	1.02	S	SS	X	X	X							X	
Ammonium sulfite	D	1.41	S	SS	X	X	X							X	

Table ANNEX 1.0 Hazardous Substance Countermeasure Matrix															
Material	EPA Category	Density	Physical Form	P/C/D Category	Material Transfer Media			Neutralizing Agent		Precipitating Agent	Biological Treatment Agent	Gelling Agent	Absorbing Agent	Oxidizing Agent	Dispersing Agent
					Activated Carbon	Cationic Resin	Anionic Resin	Acid	Base						
Ammonium tartrate	D	1.61	S	SS	X	X	X								
Ammonium thiocyanate	D	1.31	S	SM	X	X	X								
Ammonium thiosulfate	D	—	S	SM	X	X	X								
• Amyl acetate	C	0.88	L	IMF	X						X	X	X		X
Aniline	C	1.022	L	SS	X						X	X	X		X
• Antimony pentachloride	C	2.34	S	P	X	X				X					
• Antimony pentafluoride	C	2.99	S	P	X	X	X			X					
• Antimony potassium	C	2.6	S	P	X	X	X			X					
• Antimony tribromide	C	4.14	X	P	X	X	X			X					
• Antimony trichloride	C	3.14	S	P	X	X				X					
• Antimony trifluoride	C	4.38	S	P	X	X	X			X					
• Antimony trioxide	C	5.2	S	P	X	X				X					
Arsenic acid	C	2-2.5	S	P	X		X		X	X		X	X		
Arsenic disulfide	C	3.4	S	IS	X	X	X			X		X	X		
Arsenic pentoxide	B	4.09	S	P	X	X				X					
Arsenic trichloride	C	2.16	S	P	X	X				X					
Arsenic trioxide	B	3.89	S	P	X	X	X			X					
Arsenic trisulfide	B	3.43	S	IS	X	X	X			X					
Barium cyanide	A	—	S	SS	X	X	X			X				X	
• Benzene	C	0.879	L	INF	X							X	X		X

**Table ANNEX 1.0**  
**Hazardous Substance Countermeasure Matrix**

Material	EPA Category	Density	Physical Form	P/C/D Category	Material Transfer Media			Neutralizing Agent		Precipitating Agent	Biological Treatment Agent	Gelling Agent	Absorbing Agent	Oxidizing Agent	Dispersing Agent
					Activated Carbon	Cationic Resin	Anionic Resin	Acid	Base						
Benzolic acid	D	1.266	S	SS	X				X			X	X		
Benzonitrile	C	1.01	L	SS	X							X	X		
Benzoyl chloride	D	1.20	L	SS	X							X	X		
Benzyl chloride	D	1.09	L	IS	X							X	X		
Beryllium chloride	D	1.90	S	P	X	X				X					
Beryllium fluoride	C	1.99	S	P	X	X	X			X					
Beryllium nitrate	C	1.56	S	P	X	X				X					
• Butyl acetate	C	0.889	L	SF	X						X	X	X		X
Butylamine	C	0.74	L	N	X							X	X		
Butyric acid	D	1.00	L	M	X		X		X		X	X	X		X
• Cadmium acetate	A	2.01	S	SS	X	X				X					
• Cadmium bromide	A	5.19	S	P	X	X	X		X						
• Cadmium chloride	A	4.05	S	P	X	X				X					
Cadmium arsenate	C	3.0	S	IS	X		X			X					
Calcium arsenite	C	—	S	SS	X		X								
Calcium carbide	D	2.2	S	P	X										
Calcium chromate	D	2.89	S	SS	X		X								
Calcium cyanide	A	—	S	SS	X		X							X	
Calcium dodecylbenzene sulfonate	B	—	S	SS	X		X								
Calcium hydroxide	D	2.504	S	SS				X							

Table ANNEX 1.0 Hazardous Substance Countermeasure Matrix															
Material	EPA Category	Density	Physical Form	P/C/D Category	Material Transfer Media			Neutralizing Agent		Precipitating Agent	Biological Treatment Agent	Gelling Agent	Absorbing Agent	Oxidizing Agent	Dispersing Agent
					Activated Carbon	Cationic Resin	Anionic Resin	Acid	Base						
• Calcium hypochlorite	A	2.35	S	SM	X				X						
Calcium oxide	D	3.40	S	SM	X										
• Captan	A	1.5	S	SS	X								X		
• Carbaryl	B	—	S	SS	X								X		
Carbon disulfide	C	1.26	L	SS	X							X	X		
• Chlordane	A	1.59	L	IS	X							X	X		
• Chlorine	A	3.2	L	SF	X								X		
Chlorobenzene	B	1.1	L	IS	X							X	X		
Chloroform	B	1.5	L/G	IS	X							X	X		
Chlorosulfonic acid	C	1.8	L	SS	X		X		X			X	X		
• Chromic acetate	D	—	S	SS	X	X				X					
• Chromic acid	D	2.7	L	SM	X	X			X	X		X	X		
• Chromic sulfate	D	1.7	S	SS	X	X				X					
• Chromous chloride	D	2.87	S	IS	X	X				X					
• Chromyl chloride	D	1.91	S	SS	X	X				X					
Cobaltous bromide	C	2.47	S	P	X	X	X			X					
Cobaltous fluoride	C	4.46	S	P	X	X	X			X					
Cobaltous formate	C	2.13	S	P	X	X				X					
Cobaltous sulfamate	C	—	S	P	X	X				X					
Coumaphos	A	—	S	SS	X								X		

<p align="center"><b>Table ANNEX 1.0</b> <b>Hazardous Substance Countermeasure Matrix</b></p>															
Material	EPA Category	Density	Physical Form	P/C/D Category	Material Transfer Media			Neutralizing Agent		Precipitating Agent	Biological Treatment Agent	Gelling Agent	Absorbing Agent	Oxidizing Agent	Dispersing Agent
					Activated Carbon	Cationic Resin	Anionic Resin	Acid	Base						
• Cresol	B	1.0	S	SS	X						X	X	X		X
Cupric acetate	B	1.9	S	P	X	X				X					
Cupric aceto-arsenite	B	—	S	IS	X	X	X			X					
Cupric chloride	B	1.83	S	P	X	X				X					
Cupric formate	B	—	S	P	X	X				X					
Cupric glycinate	B	—	S	P	X	X				X					
Cupric lactate	B	2.32	S	P	X	X				X					
Cupric nitrate	B	—	S	IS	X	X	X			X					
Cupric oxalate	B	1.9	S	P	X	X				X					
Cupric subacetate	B	2.28	S	P	X	X				X					
Cupric sulfate	B	—	S	P	X	X				X					
Cupric sulfate ammoniated	B	—	S	P	X	X				X					
Cupric tartrate	B	—	S	IS	X	X				X					
Cuprous bromide	B	4.72	S	IS	X	X	X			X					
Cyanogen chloride	A	1.186	G	SS	X	X									
Cyclohexane	C	0.779	L	INF	X						X	X	X		X
• 2,4-D acid	B	0.82	—	IS									X		
• 2,4-D esters	B	—	—	IS									X		
Calapon	B	1.38	L	SS	X							X	X		
• DDT	A	—	S	IS	X							X	X		

**Table ANNEX 1.0**  
**Hazardous Substance Countermeasure Matrix**

Material	EPA Category	Density	Physical Form	P/C/D Category	Material Transfer Media			Neutralizing Agent		Precipitating Agent	Biological Treatment Agent	Gelling Agent	Absorbing Agent	Oxidizing Agent	Dispersing Agent
					Activated Carbon	Cationic Resin	Anionic Resin	Acid	Base						
• Diazinon	A	1.116	L	IS	X								X		
• Dicamba	C	—	S	SS	X								X		
Dichlobenil	C	—	S	SS	X								X		
Dichlorvos	A	—	S	SS	X							X	X		
• Dieldrin	A	1.75	L	SS	X								X		
Diethylamine	C	0.71	L	SF	X						X	X	X		X
Dimethylamine	C	0.68	L	SF	X						X	X	X		X
Dinitrobenzene	C	1.54	L	SS	X						X	X	X		X
Dinitrophenol	B	1.68	L	SS	X						X	X	X		X
Diquat	C	—	S	SS	X								X		
Disulfoton	A	1.14	L	SS	X								X		
Diuron	B	—	S	SS								X	X		
Dodecylbenzene - sulfuric acid	B	—	L	SS	X		X				X	X	X		X
Dursban	B	—	—	SS	X								X		
Endosulfan	A	—	S	SS	X								X		
Endrin	A	—	S	IS	X								X		
Ethion	A	1.22	L	SS	X							X	X		
• Ethylbenzene	C	0.958	L	INF	X						X	X	X		X
Ethylenediamine	C	0.96	L	SF	X						X	X	X		X

Table ANNEX 1.0 Hazardous Substance Countermeasure Matrix															
Material	EPA Category	Density	Physical Form	P/C/D Category	Material Transfer Media			Neutralizing Agent		Precipitating Agent	Biological Treatment Agent	Gelling Agent	Absorbing Agent	Oxidizing Agent	Dispersing Agent
					Activated Carbon	Cationic Resin	Anionic Resin	Acid	Base						
• EDTA	D	—	S	IS	X						X		X		X
Ferric ammonium citrate	C	—	S	P	X	X	X			X					
Ferric ammonium oxalate	C	—	S	P	X	X				X					
Ferric chloride	C	2.89	S	P	X	X				X					
Ferric fluoride	C	3.52	S	P	X	X	X			X					
Ferric nitrate	C	1.68	S	P	X	X				X					
Ferric sulfate	C	2.0	S	P	X	X				X					
Ferrous ammonium sulfate	C	1.87	S	P	X	X	X			X					
Ferrous chloride	C	1.93	S	P	X	X				X					
Ferrous sulfate	C	1.899	S	P	X	X				X					
• Formaldehyde	C	0.815	L	M	X		X				X	X	X		X
Formic acid	C	1.22	L	M	X				X		X	X	X		X
Fumaric acid	D	1.635	L	SS	X				X		X	X	X		X
Furfural	C	1.15	L	SS	X						X	X	X		X
Guthion	A	1.44	L	IS	X							X	X		
Heptachlor	A	1.58	S	IS	X								X		
• Hydrochloric acid	D	1.00	L	SS	X		X		X			X	X		
• Hydrofluoric acid	D	1.15	L	M	X		X		X			X	X		
Hydrogen cyanide	A	0.70	L/G	M	X		X		X			X	X		
Hydroxylamine	D	1.23	S	SS	X								X		

**Table ANNEX 1.0**  
**Hazardous Substance Countermeasure Matrix**

Material	EPA Category	Density	Physical Form	P/C/D Category	Material Transfer Media			Neutralizing Agent		Precipitating Agent	Biological Treatment Agent	Gelling Agent	Absorbing Agent	Oxidizing Agent	Dispersing Agent
					Activated Carbon	Cationic Resin	Anionic Resin	Acid	Base						
Isoprene	C	0.681	L	IVF	X						X	X	X		X
Isopropanol-amine dodecyl-benzenesulfonate	B	0.90	L	SS	X						X	X	X		X
Kelthane	C	—	—	IS	X								X		
Lead acetate	D	2.25	S	P	X	X	X			X					
Lead arsenate	D	7.8	S	IS	X	X	X			X					
Lead chloride	D	5.85	S	P	X	X				X					
Lead fluoborate	D	—	S	P	X	X	X			X					
Lead fluoride	C	8.2	S	IS	X	X	X			X					
Lead iodide	D	6.16	S	IS	X	X	X			X					
Lead nitrate	D	4.53	S	P	X	X	X			X					
Lead stearate	D	1.4	S	P	X	X				X					
Lead sulfate	D	6.2	S	IS	X	X				X					
Lead sulfide	C	7.1	S	IS	X	X	X			X				X	
Lead tetra-acetate	D	2.23	S	P	X	X				X					
Lead thiocyanate	D	3.8	S	IS	X	X				X					
Lead thiosulfate	D	5.18	S	IS	X	X				X					
Lead tungstate	D	8.24	S	IS	X	X	X			X					
Lindane	A	1.87	S	SS	X								X		
Lithium bichromate	D	2.34	S	SM	X	X	X			X					
Lithium chromate	D	—	S	SM	X	X	X			X					

**Table ANNEX 1.0**  
**Hazardous Substance Countermeasure Matrix**

Material	EPA Category	Density	Physical Form	P/C/D Category	Material Transfer Media			Neutralizing Agent		Precipitating Agent	Biological Treatment Agent	Gelling Agent	Absorbing Agent	Oxidizing Agent	Dispersing Agent
					Activated Carbon	Cationic Resin	Anionic Resin	Acid	Base						
Malathion	A	1.23	L	SS								X	X		
Maleic acid	D	1.59	S	SS	X				X		X		X		X
Maleic anhydride	D	0.934	S	SF	X				X		X		X		X
Mercuric acetate	A	3.25	S	P	X	X				X			X		
Mercuric cyanide	A	4.09	S	P	X	X	X			X			X	X	
Mercury nitrate	A	4.3	S	P	X	X				X			X		
Mercuric sulfate	A	6.47	S	P	X	X				X			X		
Mercuric thiocyanate	A	—	S	IS	X	X	X			X			X		
Mercurous nitrate	A	4.79	S	P	X	X				X			X		
Methoxychlor	A	1.41	S	IS	X								X		
Methyl mercaptan	B	0.87	L/G	INF	X							X	X		X
• Methyl methacrylate	D	0.936	L	INF	X							X	X		X
Methyl paration	B	1.358	L	IS	X							X	X		
Mevinphos	A	—	L	M	X							X	X		
• Monoethylamine	C	1.01	—	N	X								X		X
• Monomethylamine	C	—	—	SF	X								X		X
• Naled	A	—	S/L	IS	X							X	X		
Naphthalene	B	1.162	S	IS	X								X		
Napthenic acid	A	1.4	S	SS	X							X	X		
Nickel ammonium sulfate	D	1.92	S	P	X	X				X					

Table ANNEX 1.0 Hazardous Substance Countermeasure Matrix															
Material	EPA Category	Density	Physical Form	P/C/D Category	Material Transfer Media			Neutralizing Agent		Precipitating Agent	Biological Treatment Agent	Gelling Agent	Absorbing Agent	Oxidizing Agent	Dispersing Agent
					Activated Carbon	Cationic Resin	Anionic Resin	Acid	Base						
• Nickel chloride	D	3.55	S	P	X	X				X					
Nickel formate	C	2.15	S	P	X	X				X					
Nickel hydroxide	C	4.36	S	IS	X	X				X					
• Nickel nitrate	D	2.05	S	P	X	X				X					
• Nickel sulfate	D	1.948	S	P	X	X				X					
• Nitric acid	C	1.502	L	M	X				X			X			
Nitrobenzene	D	1.19	L	SS	X							X	X		
• Nitrogen dioxide	C	1.448	L/G	M	X										
Nitrophenol	B	1.4	L	SS	X						X	X	X		X
Paraformaldehyde	C	1.46	S	SS	X						X		X		X
Parathion	A	1.26	L	IS	X							X	X		
• Pentachlorophenol	A	1.978	S	IS	X							X	X	X	
• Phenol	B	1.071	S	SS	X		X				X	X	X		
• Phosgene	D	1.392	G/L	SS	X								X		X
• Phosphoric acid	D	1.834	L	M	X				X			X	X		
Phosphorous	A	1.8-2.7	S	IS											
Phosphorous oxychloride	D	1.67	L	SS	X	X						X			
Phosphorous pentasulfide	C	2.03	S	SS	X										
Phosphorous trichloride	D	1.574	S	SS	X	X	X								
• Polychlorinated biphenyls	A	—	S	IS									X		

**Table ANNEX 1.0**  
**Hazardous Substance Countermeasure Matrix**

Material	EPA Category	Density	Physical Form	P/C/D Category	Material Transfer Media			Neutralizing Agent		Precipitating Agent	Biological Treatment Agent	Gelling Agent	Absorbing Agent	Oxidizing Agent	Dispersing Agent
					Activated Carbon	Cationic Resin	Anionic Resin	Acid	Base						
Potassium arsenate	C	2.87	S	P	X		X								
Potassium arsenite	C	—	S	P	X		X								
Potassium bichromate	D	2.68	S	SS	X		X								
Potassium chromate	D	2.73	S	SS	X		X								
• Potassium cyanide	A	1.52	S	SS	X		X							X	
Potassium hydroxide	C	2.04	S	SM	X			X							
Potassium permanganate	B	2.7	S	SS	X		X								
Propionic acid	D	0.993	L	M	X				X		X	X	X		X
Propionic anhydride	D	0.013	L	M	X				X		X	X	X		X
Propyl alcohol	D	0.8	L	M	X						X	X	X		X
Pyrethrins	C	—	L	SS								X	X		
Quinoline	A	1.09	L	SS	X							X	X		X
Resorcinol	B	1.27	S	SS	X						X		X		
Selenium oxide	C	3.954	S	SS	X	X				X					
Sodium	C	0.971	S	SS											
Sodium arsenate	C	1.76	S	SS	X		X								
Sodium arsenite	C	1.87	S	SS	X		X								
Sodium bichromate	D	2.52	S	SM	X	X									
Sodium bifluoride	D	2.08	S	SS	X		X			X					
Sodium bisulfide	D	1.48	S	SS	X		X							X	

**Table ANNEX 1.0**  
**Hazardous Substance Countermeasure Matrix**

Material	EPA Category	Density	Physical Form	P/C/D Category	Material Transfer Media			Neutralizing Agent		Precipitating Agent	Biological Treatment Agent	Gelling Agent	Absorbing Agent	Oxidizing Agent	Dispersing Agent
					Activated Carbon	Cationic Resin	Anionic Resin	Acid	Base						
Sodium chromate	D	1.483	S	SS	X	X									
• Sodium cyanide	A	1.48	S	SS	X	X								X	
Sodium dodecyl-benzene sulfonate	B	—	S	SS	X	X					X		X		X
Sodium fluoride	D	2.78	S	SS	X		X			X					
Sodium hydrosulfide	D	—	S	SS	X		X						X		
• Sodium hydroxide	C	2.13	L	SS	X			X				X			
Sodium hypochlorite	A	—	S	SM	X		X								
Sodium methylate	C	2.4	S	SS	X		X				X				X
Sodium nitrite	B	2.17	S	SS	X										
Sodium phosphate monobasic	D	2.04	S	SS	X										
Sodium phosphate dibasic	D	2.06	S	SM	X										
Sodium phosphate tribasic	D	1.5	S	SS											
Sodium selenite	C	1.63	S	SS			X								
Sodium sulfide	C	1.856	S	SS	X		X			X				X	
• Stannous fluoride	D	2.79	S	SS		X	X			X					
Strontium chromate	D	—	S	IS	X	X	X			X					
Strychnine	C	1.36	S	SS	X								X		
• Styrene	C	0.909	L	INF	X							X	X		X
• Sulfuric acid	C	1.834	L	M	X				X			X	X		
Sulfur monochloride	D	1.69	S	SS	X				X						

**Table ANNEX 1.0**  
**Hazardous Substance Countermeasure Matrix**

Material	EPA Category	Density	Physical Form	P/C/D Category	Material Transfer Media			Neutralizing Agent		Precipitating Agent	Biological Treatment Agent	Gelling Agent	Absorbing Agent	Oxidizing Agent	Dispersing Agent
					Activated Carbon	Cationic Resin	Anionic Resin	Acid	Base						
2,4,5-T acid	A	—	S	IS									X		
2,4,5-T esters	A	—	S	IS									X		
TDE	A	—	S	IS	X								X		
Tetraethyl lead	A	1.659	L	IS	X							X	X		
Tetraethyl pyrophosphate	B	1.2	L	M	X							X			
• Toluene	C	0.86	L	INF	X						X	X	X		X
Toxaphene	A	1.66	L	IS	X							X	X		
Trichlorfon	B	1.73	S	SS	X								X		
Trichlorophenol	A	1.1	L	IS	X							X	X		
Triethanolamine dodecylbenzene-sulfonate	B	—	L	SS	X							X	X		
• Triethylamine	C	1.13	L	SF	X						X	X	X		X
• Trimethylamine	C	0.66	L	SF	X						X	X	X		X
Uranium peroxide	D	2.5	S	IS	X	X				X					
Uranyl acetate	D	2.89	S	P	X	X				X					
Uranyl nitrate	D	2.80	S	P	X	X				X					
Uranyl sulfate	D	3.28	S	P	X	X				X					
Vanadium pentoxide	C	3.36	S	P	X	X				X					
Vanadyl sulfate	C	—	S	P	X	X				X					
Vinyl acetate	C	0.94	S	SF	X						X	X	X		X
• Xylene	C	0.86	L	INF	X							X	X		X

**Table ANNEX 1.0**  
**Hazardous Substance Countermeasure Matrix**

Material	EPA Category	Density	Physical Form	P/C/D Category	Material Transfer Media			Neutralizing Agent		Precipitating Agent	Biological Treatment Agent	Gelling Agent	Absorbing Agent	Oxidizing Agent	Dispersing Agent
					Activated Carbon	Cationic Resin	Anionic Resin	Acid	Base						
Xylenol	C	1.02	L	SS	X							X	X		
Zectran	C	—	—	SS	X								X		
Zinc acetate	C	1.735	S	P	X	X				X					
Zinc ammonium chloride	C	1.80	S	P	X	X	X			X					
Zinc bichromate	C	—	S	P	X	X	X			X					
Zinc borate	C	3.64	S	P	X	X	X			X					
Zinc bromide	C	4.22	S	P	X	X	X			X					
Zinc carbonate	C	4.42	S	IS	X	X				X					
Zinc chloride	C	2.907	S	P	X	X				X					
Zinc cyanide	A	1.85	S	IS	X	X	X			X				X	
Zinc fluoride	C	4.84	S	P	X	X	X			X					
Zinc formate	C	2.21	S	P	X	X				X					
Zinc hydrosulfite	C	—	S	P	X	X	X			X				X	
Zinc nitrate	C	2.07	S	P	X	X				X					
Zinc phenol-sulfonate	C	—	S	P	X	X	X			X					
Zinc phosphide	C	4.55	S	IS	X	X	X			X					
Zinc potassium chromate	C	—	S	IS	X	X	X			X					
Zinc silicofluoride	C	2.1	S	P	X	X	X			X					
Zinc sulfate	C	3.54	S	P	X	X				X					
Zinc sulfate monohydrate	C	3.28	S	P	X	X				X					

**Table ANNEX 1.0**  
**Hazardous Substance Countermeasure Matrix**

Material	EPA Category	Density	Physical Form	P/C/D Category	Material Transfer Media			Neutralizing Agent		Precipitating Agent	Biological Treatment Agent	Gelling Agent	Absorbing Agent	Oxidizing Agent	Dispersing Agent
					Activated Carbon	Cationic Resin	Anionic Resin	Acid	Base						
Zirconium acetate	D	—	S	P	X	X				X					
Zirconium nitrate	D	—	S	P	X	X				X					
Zirconium oxychloride	D	—	S	P	X	X				X					
Zirconium potassium fluoride	D	—	S	P	X	X				X					
Zirconium sulfate	D	3.22	S	P	X	X				X					
Zirconium tetrachloride	D	2.8	S	P	X	X				X					

**Note:**

- — Among most prevalent HS in Navy workplaces.

Table ANNEX 1.1 EPA Toxicity Category	
Category	Toxicity Range
A	$LC_{50} \leq 1 \text{ ppm}$
B	$1 \text{ ppm} < LC_{50} \leq 10 \text{ ppm}$
C	$10 \text{ ppm} < LC_{50} \leq 100 \text{ ppm}$
D	$100 \text{ ppm} < LC_{50} \leq 500 \text{ ppm}$

**Notes:**

ppm = parts per millions  
 LC = lethal concentration

## HAZARDOUS CHEMICALS CLASSIFIED ACCORDING TO P/C/D/ CATEGORY

**Category IVF:** Insoluble volatile floater — material lighter than water with a vapor pressure greater than 20 Millimeters of mercury (mmHg) and a solubility of less than 1,000 parts per million (ppm), or materials with vapor pressure greater than 100 mmHg and solubility less than 10,000 ppm.

Table ANNEX 1.2 Insoluble Volatile Floater	
Allyl chloride	Methyl mercaptan
♦ Benzene	♦ Methyl methacrylate
Cyclohexane	♦ Styrene
Isoprene	♦ Toluene

**Note:** ♦ Among the most prevalent Hazardous Substances found in Navy workplaces.

**Category INF:** Insoluble nonvolatile floater — material lighter than water with vapor pressure less than 10 mmHG and solubility less than 1,000 ppm.

Table ANNEX 1.3 Insoluble Nonvolatile Floater		
♦ Amyl acetate	♦ Xylene	♦ Ethyl benzene

**Category IS:** Insoluble sinker — material heavier than water and solubility less than 1,000 ppm.

Table ANNEX 1.4 Insoluble Sinker	
Aldrin	Lead thiosulfate
Arsenic disulfide	Lead tungstate
Benzyl chloride	Methoxychlor
Calcium arsenate	Methyl parathion
Chlorobenzene	♦ Naled
Chloroform	Naphthalene
♦ Chromous chloride	Nickel hydroxide
Cupric acetoarsenite	Parathion
Cupric oxalate	♦ Pentachlorophenol
Cupric tartrate	Phosphorus

Table ANNEX 1.4 Insoluble Sinker	
Cuprous bromide	◆ Polychlorinated biphenyls
◆ 2,4-D acid	Strontium chromate
◆ 2,4-D esters	Strychnine
◆ Diaxinon	2,4,5-T acid
EDTA	2,4,5-T esters
Guthion	TDE
Heptachlor	Tetraethyl lead
Kelthane	Toxaphene
Lead arsenate	Trichlorophenol
Lead fluoride	Uranium peroxide
Lead iodide	Zinc carbonate
Lead sulfate	Zinc cyanide
Lead sulfide	Zinc phosphide
Lead thiocyanate	Zinc potassium chromate

**Category SM:** Soluble mixers — solid substances that have a solubility greater than 1,000 grams per liter of water.

Table ANNEX 1.5 Soluble Mixers	
Ammonium acetate	Lithium bichromate
Ammonium sulfamate	Lithium chromate
Ammonium thiocyanate	Potassium hydroxide
Ammonium thiosulfate	Sodium bichromate
Calcium hypochloride	Sodium hypochlorite
Calcium oxide	Sodium phosphate, dibasic
◆ Chromic Acid	

**Category P:** Precipitator — salts that dissociate or hydrolyze in water with subsequent precipitation of toxic ion.

Table ANNEX 1.6 Precipitators		
Aluminum floride	Cupric Nitrate	◆ Nickel sulfate
Aluminum sulfate	Cupric subacetate	Potassium arsenate
◆ Antimony pentachloride	Cupric sulfate	Potassium arsenite
◆ Antimony pentafluoride	Cupric sulfate ammoniated	Uranyl acetate
◆ Antimony potassium tartrate	Ferric ammonium citrate	Uranyl nitrate
◆ Antimony tribromide	Ferric ammonium oxalate	Uranyl sulfate
◆ Antimony trichloride	Ferric chloride	Vanadium pentoxide
◆ Antimony trifluoride	Ferric fluoride	Vanadium sulfate
◆ Antimony trioxide	Ferric nitrate	Zinc acetate
Arsenic acid	Ferric sulfate	Zinc ammonium chloride
Arsenic pentoxide	Ferrous ammonium sulfate	Zinc bichromate
Arsenic trichloride	Ferrous chloride	Zinc borate
Arsenic trioxide	Ferrous sulfate	Zinc bromide
Beryllium chloride	Lead acetate	Zinc chloride
Beryllium fluoride	Lead chloride	Zinc fluoride
Beryllium nitrate	Lead fluoborate	Zinc formate
Cadmium bromide	Lead nitrate	Zinc hydrosulfide
Cadmium floride	Lead stearate	Zinc nitrate
Calcium floride	Lead tetracetate	Zinc phenolsulfonate
Cobaltous bromide	Mercuric acetate	Zinc siliconfluoride
Cobaltous fluoride	Mercuric cyanide	Zinc sulfate
Cobaltous formate	Mercuric nitrate	Zinc sulfate, monohydrate
Cobaltous sulfamate	Mercuric sulfate	Zirconium acetate
Cupric acetate	Mercurous nitrate	Zirconium nitrate
Cupric chloride	Nickel ammonium sulfate	Zirconium oxychloride
Cupric formate	◆ Nickel chloride	Zirconium potassium fluoride
Cupric glycinate	Nickel formate	Zirconium sulfate
Cupric lactate	◆ Nickel nitrate	Zirconium tetrachloride

**Category SF:** Soluble floaters — material lighter than water and of a solubility greater than 1,000 ppm.

<b>Table ANNEX 1.7 Soluble Floaters</b>	
Acetic anhydride	Diethylamine
Acetone cyanohydrin	Dimethylamine
Acrolein	Ethylenediamine
Acrylonitrile	Maleic anhydride
Adiponitrile	◆ Monoethylamine
◆ Ammonia	◆ Trimethylamine
◆ Butyl acetate	Vinyl acetate
◆ Chlorine	

**Category M:** Miscible — liquids that are free to mix with water in any proportion.

<b>Table ANNEX 1.8 Miscibles</b>		
Acetaldehyde	Formic acid	◆ Phosphoric acid
◆ Acetic acid	◆ Hydrofluoric acid	Propionic acid
Allyl alcohol	Hydrogen cyanide	Propionic anhydride
◆ Ammonium hydroxide	Mevinphos	Propyl alcohol
Butylamine	◆ Monoethylamine	◆ Sulfuric acid
Butyric acid	◆ Nitric acid	Tetraethyl pyrophosphate
◆ Formaldehyde	◆ Nitrogen dioxide	

**Category SS:** Soluble sinkers — materials heavier than water and of solubility greater than 1,000 ppm.

Table ANNEX 1.9 Soluble Sinkers	
Acetyl bromide	Dodecylbenzenesulfonic acid
Acetyl chloride	Duraban
Ammonium benzoate	Endosulfan
Ammonium bicarbonate	Ethion
Ammonium bichromate	Fumaric acid
Ammonium bifluoride	Furfural
Ammonium bisulfite	♦ Hydrochloric acid
Ammonium bromide	Hydroxylamine
Ammonium carbamate	Isopropanolamine dodecylbenzene sulfonate
Ammonium chloride	Lindane
Ammonium chromate	Malathion
Ammonium citrate	Maleic acid
Ammonium fluoborate	Naphteric acid
Ammonium hypophosphate	Nitrogenzene
Ammonium oxalate	Nitrophenol
Ammonium pentaborate	Paraformaldehyde
Ammonium persulfate	♦ Phenol
Ammonium siliconfluoride	♦ Phosgene
Ammonium sulfide	Phosphorus oxychloride
Ammonium sulfite	Phosphorus pentrasulfide
Ammonium tartrate	Phosphorus trichloride
Aniline	Potassium bichromate
Barium cyanide	Potassium chromate
Benzoic acid	♦ Potassium cyanide
Benzonitrile	Potassium permanganate
Benzoyl chloride	Pyrethins
♦ Cadmium acetate	Quinoline
Cadmium arsenite	Resorcinol
Calcium chromate	Selenium oxide

Table ANNEX 1.9 Soluble Sinkers	
Calcium cyanide	Sodium
Calcium codocylbenzenesulfonate	Sodium arsenate
Calcium hydroxide	Sodium arsenite
♦ Captan	Sodium bifluoride
♦ Carbonyl	Sodium bisulfite
Carbon disulfide	Sodium chromate
Chlorosulfonic acid	♦ Sodium cyanide
♦ Chromic acid	Sodium dodecylbenzenesulfonate
♦ Chromic sulfate	Sodium fluoride
♦ Chromyl chloride	Sodium hydrosulfide
Coumaphas	♦ Sodium Hydroxide
♦ Cresol	Sodium methylate
Cyanogen chloride	Sodium nitrite
Dalapon	Sodium phosphate, monobasic
Dicamba	Sodium phosphate, tribasic
Dichlobenil	Sodium selenite
Dichlone	Sodium sulfide
Dichlonous	♦ Stannous fluoride
♦ Dieldrin	Sulfur monochloride
Dinitrobenzene	Trichlorfon
Dinitrophenol	Triethanolamine dodecylbenzenesulfonate
Diquat	Xylenol
Disulfoton	Zectran
Diuron	

## Other Major Column Headings

The Major Column Headings in Table ANNEX 1.0 list applicable chemical/biological mitigation procedures. Each procedure is explained in Table ANNEX.1.0. An "X" in Table ANNEX 1.0 indicates that the mitigation procedure is an applicable remediation tool for the chemical listed.

<b>Table ANNEX 1.10 Other Major Column Headings</b>	
<b>Mitigation Procedure and Procedure Definitions</b>	
<b>Material Transfer Media</b>	
Material transfer medias are used to "pull" a substance out of one environment into another. These materials are added to the location of the spill to induce physical migration away from the spill site. This physical transfer from the environment to the media, then allows the media to be removed for disposal along with the hazard. Activated carbon, cationic and anionic resins are three substances used as mass transfer remediation materials.	
<b>Neutralizing Agents</b>	
Neutralization is an acceptable treatment for all spills of acids or bases provided some method of monitoring the pH is available. This remediation tool is accomplished by adding either an acid or base to the spill site to bring the environmental pH back to normal. Whenever possible, neutralization should be accomplished on land spills before hazardous materials can enter aquifers or surface waters. After the spilled material has entered surface waters the toxicity associated with the change in pH from natural background conditions is usually most critical. Neutralization of spills of large quantities of material is usually appropriate regardless of the neutralization agent available. However, when a choice of agents is available, it is extremely important to select the agent that produces the least toxic reaction products in returning the pH to normal. However, it is better to undertreat than to risk overtreatment with a neutralizing agent. Final endpoint treatment pH values between 6 and 9 are acceptable.	

**Table ANNEX 1.10**  
**Other Major Column Headings**

**Precipitating Agents**

Precipitation is a valid mitigation technique for removing metal ions from solution. Many metal ions can be precipitated with hydroxide ions at a high pH. However, these salts will re-enter the water column when the pH returns to neutral, thereby causing a long-term hazard to the environment.

**Biological Treatment Agents**

The use of biological agents has been restricted, for the most part, to treatment of oil and oil derivatives or components, and is more of a "polishing tool" after the initial removal of the majority of the contamination. This method is a natural process that "cleans" through biochemical breakdown. The spill is remediated in situ, in areas inaccessible to other treatment methods and as a supplemental tool to other spill treatment methods. Biological agents for the mitigation of organic liquids are recommended only if (1) the spill is contained (i.e., as in a pond or a stream that may be dammed), (2) sufficient time is available for biodegradation, and (3) the introduction of microbes will not be detrimental to the existing environment.

**Gelling Agents**

Thickening and gelling agents are really a subclass of absorbents. Their purpose in spill treatment is to immobilize the spilled material to prevent further spreading and to condition the spill for mechanical removal. Like other absorbents, effective thickening and gelling agents are appropriate for use on all land spills and in some cases they may be appropriate for water spills of organic liquids that float. Natural proteinaceous compounds can be used for gelling hazardous aqueous solutions, but water-soluble polyelectrolyte polymers have been found to be the most effective for thickening most water-soluble liquids.

**Absorbing Agents**

The use of absorbents for treatment of spills of hazardous substances other than oil has not been practiced or even studied to a great extent. Available information indicates that absorbents would be of value for treatment of all land spills and on water spills of some organic materials. Use of absorbents for treatment of water spills will probably be limited to those substances that are insoluble and float on the water surface (i.e., that behave much like oil). These absorbents can be divided into two general types: natural and synthetic. Natural absorbents include natural products such as vegetation residues (i.e., corn stalks, straw, and wood residues). Synthetic products have been made from various organic polymers including polypropylene, alklystyrene and polyurethane. They are specifically manufactured to absorb hydrophobic organic liquids while repelling hydrophilic liquids such as water.

**Oxidizing Agents**

The potential hazards in using oxidizing agents for spill mitigation are so great that this tool should only be used as a last resort. Additionally, it should only be applied to land spills and completely contained water spills. The hazards of Oxidizing agents are two fold: overall toxicity to most organisms at low concentrations, and the fact that reactions are extremely difficult to control and seldom go to completion. Additionally, toxic intermediate reaction products are often left in the environment unless excess oxidizing agent is available to sustain the reaction.

Table ANNEX 1.10 Other Major Column Headings	
Dispersing Agents	
<p>Dispersing agents facilitate the action of biological degradation of a hazardous spill by increasing the surface area of the material through the formation of micro-droplets. The dispersing agent promotes the formation of hydrocarbon-in-water suspensions through the chemical actions of surfactants, solvents, and stabilizers. The surfactants reduce the surface tension of organic materials and facilitate the dispersing of the micro-droplets into the water column.</p>	

## **ANNEX 2 — SPILL RESPONSE CHECKLISTS**

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## ANNEX 2 — SPILL RESPONSE CHECKLISTS

### 1.0 SPILL RESPONSE CHECKLISTS

This section contains check sheets to assist the dispatch and incident commander during a Hazardous Substance response. The following checklists are provided as guidelines only.

<b>Table Annex 2.1 First Responder Checklist</b>	
<b>Discovery and Notification</b>	
	Stop transfer.
	Activate emergency responders. Base Fire Department phone: Base Security phone: Local Police phone:
	Notify facility spill management team. Incident Commander: Phone: Alternate: Phone:
	Deploy facility emergency response assets.
<b>Initial Actions</b>	
	Preliminary Spill Assessment. Time and type of Incident (Spill/Leak/Fire): Type of OHS spilled: Approximate quantity: Spill source isolated (time): Personnel injuries: Personnel rescue: Areas threatened: Weather conditions: Response operations under way:
	Advise Incident Commander on initial actions.
	Eliminate ignition sources.
	Preliminarily assess risk to response personnel.
	Activate additional support assets as required.
<b>Defensive Actions</b>	
	Secure the source of pollution. Anticipated movement of spill:
	Deploy additional response assets.
	Request assistance, if required
Continue to direct initial response actions until relieved by Incident Commander, or other recognized authority	

<b>Table Annex 2.2</b> <b>Incident Commander Checklist</b>	
<b>Discovery and Notification</b>	
	Notify Terminal Superintendent.
	Notify the National Response Center. Time of notification: NRC report number:
	Notify federal agencies. EPA Regional Office USCG Marine Safety Office
	Notify state emergency agencies.
	Notify local emergency agencies.
<b>Initial Actions</b>	
	Cleanup team activated (time):
	Spill management team activated (time):
	Evaluate the incident. Materials involved: Personnel hazards: Fire/Explosion hazard: Total amount lost: Recovered amount: Evaporation/Burned: Uncontained: Wildlife Impact:
	Advise the Federal On Science Coordinator (FOSC) on actions being taken.
	Determine if support is sufficient. Land response equipment. Water response equipment.
<b>Defensive Actions</b>	
	Secure the source.
	Prepare and follow site safety plan. Conduct site safety briefings for response personnel. Establish decontamination procedures for response personnel. Set up eyewash/washdown station.
	Set up first-aid stations.
	Designate exposure monitoring personnel.
	Deploy response assets.
	Evacuations. Facility evacuation. Base evacuation. Community evacuation.
	Request assistance if required.
	Establish site traffic control.

<b>Table Annex 2.2</b> <b>Incident Commander Checklist</b>	
	Establish command post (use ICS structure) and communications center.
	Obtain source(s) for material handling equipment.
	Communications: Obtain cellular phones. Establish working channels (VHF)
<b>Recovery, Cleanup, and Disposition</b>	
	Coordinate cleanup with federal (NRT, RRT, etc.) and state agencies.
	Obtain food and water for response personnel.
	Obtain sanitary facilities within reasonable distance of site.
	Document respiratory and/or skin reaction complaints.
	Salvage operations.
	Fire control.
	Obtain samples for analysis.
<b>Documentation and Cost Recovery</b>	
	Prepare preliminary damage assessment and update frequently.
	Prepare natural resource damage assessment.
	Maintain field accounting for accurate cost tracking.
	Identify funding sources. Contact USCG/EPA pollution funds.
	Waste Management Type of OHS: Amount of contaminated liquids: Amount of contaminated solids: Amount of HAZMAT:
	Determine proper storage procedures for contaminated materials.
	Determine proper disposal procedures for contaminated materials and coordinate disposal with appropriate federal and state agencies.
	Communicate available information on response activities to Public Affairs Officer (facts only, no speculation) for dissemination to media.

# **Hazardous Material Incident Report Log Sheet (Spill Response Center Dispatcher)**

<b>Table Annex 2.3</b> <b>Hazardous Material Incident Report Log Sheet</b>	
<b>Initial Incident Information</b>	
Name of reporter	
Location of spill	
Time spill occurred (estimated)	
Material spilled	
Amount spilled (estimated)	
Rate material currently spilling (estimated)	
Description of incident (leak, spill, fire)	
Anticipated movement of spill and actions being taken	
Number of injured and type of injuries (if any)	
Time of notification	
Other information	

**Immediate Notification Sequence (Spill Response Center Dispatcher)**

<b>Table Annex 2.4 Immediate Notification Sequence</b>		
<b>Person/Facility Contacted</b>	<b>Telephone Number</b>	<b>Time Contacted</b>
Base/Local Fire Department		
Base/Local Hospital (If Injuries Reported)		
Base Security / Local Police		
Incident Commander (FIC)		
Alternate Incident Commander (AIC)		

**Spill Management Team Notification/Alert (at IC/AIC request) [Spill Response Center Dispatcher]**

<b>Table Annex 2.5</b> <b>Spill Management Team Notification/Alert (at IC/AIC request)</b>			
<b>Position Title: Person</b>	<b>Telephone</b>		<b>Time Contacted</b>
	<b>Daytime</b>	<b>24-hour</b>	
Operations Section Chief:			
Planning Section Chief:			
Logistics Section Chief:			
Finance Section Chief:			
Safety Officer:			
Legal Officer:			
Government Liaison Officer:			
Public Affairs Officer:			
Investigation and Testing Officer:			
<b>Operations Section</b>			
Rescue and Salvage Branch Director			
Firefighting Unit Leader			
Cargo/pumps Unit Leader			
Spill Cleanup Branch Director			
Offshore Unit Leader			
Shoreline Protection Unit Leader			
Shoreline Cleanup Unit Leader			
Surveillance Unit Leader			
Wildlife Rescue Unit Leader			
Waste Management Unit Leader			
Spill Adviser			
<b>Planning Section</b>			
Plan Development Unit Leader			
Documentation Unit Leader			
Reports and Status Division Supervisor			
History Division Supervisor			
Environmental Unit Leader			
Technical Specialists			

Table Annex 2.5 Spill Management Team Notification/Alert (at IC/AIC request)			
Position Title: Person	Telephone		Time Contacted
	Daytime	24-hour	
<b>Logistics Section</b>			
Purchasing Unit Leader			
Facilities Unit Leader			
Security Unit Leader			
Transportation Unit Leader			
Communications Unit Leader			
Support Services Unit Leader			
Stores and Supplies Unit Leader			
Air Operations Onsite Unit Leader			
<b>Finance Section</b>			
Claims Unit Leader			
Accounting Unit Leader			
Medical Unit Leader			

# Hazardous Material Incident: Incident Commander Action Log Sheet

Table Annex 2.6 Hazardous Material Incident IC Actions Log Sheet					
Incident Location:		Time of Incident:		Date of Incident:	
Materials Involved:		Chemical Properties:		Information Source	CHEMTREC
					OHMTADS
					HMIS
					EFD
Spill Management Section Activation		Arrival Time		Section/Branch/Unit Leader	
Operations Section	Section Chief				
	Rescue & Salvage Branch				
	Firefighting Unit				
	Cargo/pumps Unit				
	Spill Cleanup Branch				
	Offshore Unit				
	Shoreline Protection Unit				
	Shoreline Cleanup Unit				
	Surveillance Unit				
	Wildlife Rescue Unit				
	Waste Management Unit				
	Spill Advisor				
Spill Management Section Activation		Arrival Time		Section/Branch/Unit Leader	
Planning Section	Planning Section Chief				
	Plan Development Unit				
	Documentation Unit				
	Reports and Status Division				
	History Division				
	Environmental Unit				
	Technical Specialists				

**Table Annex 2.6  
Hazardous Material Incident IC Actions Log Sheet**

<b>Spill Management Section Activation</b>		<b>Arrival Time</b>	<b>Section/Branch/Unit Leader</b>
Logistics Section	Logistics Section Chief		
	Purchasing Unit		
	Facilities Unit		
	Security Unit		
	Transportation Unit		
	Communications Unit		
	Support Services Unit		
	Stores & Supplies Unit		
	Air Operations Onsite Unit		
Finance Section	Finance Section Chief		
	Claims Unit		
	Accounting Unit		
	Medical Unit		

**Table Annex 2.7  
Notification**

<b>Terminal Superintendent</b>	<input type="checkbox"/> <b>Yes</b>	<input type="checkbox"/> <b>No</b>
<b>Regional Incident Commander</b>	<input type="checkbox"/> <b>Yes</b>	<input type="checkbox"/> <b>No</b>
<b>National Response Center</b>	<input type="checkbox"/> <b>Yes</b>	<input type="checkbox"/> <b>No</b>
<b>State Emergency Response Commission</b>	<input type="checkbox"/> <b>Yes</b>	<input type="checkbox"/> <b>No</b>
<b>Local Emergency Planning Committee</b>	<input type="checkbox"/> <b>Yes</b>	<input type="checkbox"/> <b>No</b>
<b>State Department of Natural Resources</b>	<input type="checkbox"/> <b>Yes</b>	<input type="checkbox"/> <b>No</b>
<b>Local Water Resources Commissions</b>	<input type="checkbox"/> <b>Yes</b>	<input type="checkbox"/> <b>No</b>
<b>Local Environmental Quality Control Office</b>	<input type="checkbox"/> <b>Yes</b>	<input type="checkbox"/> <b>No</b>
<b>Local U.S. Coast Guard Marine Safety Office</b>	<input type="checkbox"/> <b>Yes</b>	<input type="checkbox"/> <b>No</b>
<b>Regional U.S. EPA Office</b>	<input type="checkbox"/> <b>Yes</b>	<input type="checkbox"/> <b>No</b>

**Table Annex 2.8  
Response Actions**

<b>Personnel Rescue</b>	<input type="checkbox"/> In Progress	<input type="checkbox"/> Completed
<b>Facility Evacuation</b>	<input type="checkbox"/> In Progress	<input type="checkbox"/> Completed
<b>Nearby Base Evacuation</b>	<input type="checkbox"/> In Progress	<input type="checkbox"/> Completed
<b>Community Evacuation</b>	<input type="checkbox"/> In Progress	<input type="checkbox"/> Completed
<b>Site Traffic Control</b>	<input type="checkbox"/> In Progress	<input type="checkbox"/> Completed
<b>First Aid Stations Established</b>	<input type="checkbox"/> In Progress	<input type="checkbox"/> Completed
<b>Exposure Monitoring</b>	<input type="checkbox"/> In Progress	<input type="checkbox"/> Completed
<b>Fire Control</b>	<input type="checkbox"/> In Progress	<input type="checkbox"/> Completed
<b>Utilities Secured</b>		
Electric	<input type="checkbox"/> In Progress	<input type="checkbox"/> Completed
Gas	<input type="checkbox"/> In Progress	<input type="checkbox"/> Completed
Water	<input type="checkbox"/> In Progress	<input type="checkbox"/> Completed
Sanitary Sewer	<input type="checkbox"/> In Progress	<input type="checkbox"/> Completed
Other(s)	<input type="checkbox"/> In Progress	<input type="checkbox"/> Completed
<b>Building Ventilation</b>	<input type="checkbox"/> In Progress	<input type="checkbox"/> Completed
<b>Salvage Operations</b>	<input type="checkbox"/> In Progress	<input type="checkbox"/> Completed
<b>Spill/release Source Controlled</b>	<input type="checkbox"/> In Progress	<input type="checkbox"/> Completed
<b>Spill/release Contained</b>	<input type="checkbox"/> In Progress	<input type="checkbox"/> Completed
<b>Spill/release Cleanup/removal</b>	<input type="checkbox"/> In Progress	<input type="checkbox"/> Completed

**Table Annex 2.9**  
**Additional Assistance Requested**

<b>Local DoD Disaster-Preparedness Unit</b>	<input type="checkbox"/> <b>Yes</b>	<input type="checkbox"/> <b>No</b>
<b>Local Fire Department(s)</b>	<input type="checkbox"/> <b>Yes</b>	<input type="checkbox"/> <b>No</b>
<b>Local/State Police</b>	<input type="checkbox"/> <b>Yes</b>	<input type="checkbox"/> <b>No</b>
<b>Local Hospital(s)</b>	<input type="checkbox"/> <b>Yes</b>	<input type="checkbox"/> <b>No</b>
<b>Local Contractor(s)</b>	<input type="checkbox"/> <b>Yes</b>	<input type="checkbox"/> <b>No</b>
<b>Regional Incident Commander (RIC)</b>	<input type="checkbox"/> <b>Yes</b>	<input type="checkbox"/> <b>No</b>

# **Hazardous Materials Incident Evaluation Log Sheet (RIC, IC, Safety Officer, or Operations Section Chief)**

<b>Table Annex 2.10</b> <b>Hazardous Materials Incident Evaluation Log Sheet</b>		
<b>Incident location:</b> Indoor: Confined Space: Outdoor:	<b>Date:</b>	<b>Time:</b>
<b>On-Scene Status</b>		
<b>Number of Injuries:</b>	<b>Types of injuries:</b>	
<b>Area(s) Affected:</b>	<b>Area(s) Threatened</b>	
<b>Incident Conditions</b>		
<b>Leak:</b>	<b>Spill:</b>	<b>Fire:</b>
<b>Vapors:</b>	<b>Dust:</b>	<b>Other:</b>
<b>Weather Conditions</b>		
<b>Wind Direction:</b>	<b>Wind Speed:</b>	<b>Temperature: (°F)(°C)</b>
<b>% Cloud Cover:</b>	<b>Rain/Sleet/Snow:</b>	<b>Other:</b>
<b>Material(s) Involved</b>		
<b>Chemical Name(s):</b>	<b>Trade Name(s):</b>	<b>Identification Number(s) (UN or CAS)</b>
<b>DOT Hazard Class:</b>  <b>Container Type(s):</b>	Solid ( ) Liquid ( ) Gas ( ) Mixture ( )	<b>Quantity Spilled:</b> (Gallons/lbs./other)

**Table Annex 2.10  
Hazardous Materials Incident Evaluation Log Sheet**

**Hazard Characteristics**

Chemical 1:	Chemical 2:	Chemical 3:
Health:	Health:	Health:
Flammability:	Flammability:	Flammability:
Reactivity:	Reactivity:	Reactivity:
Special Hazards:	Special Hazards:	Special Hazards:
Water Reactive:    Yes    No	Water Reactive:    Yes    No	Water Reactive:    Yes    No
Flash Point:                      (°F)	Flash Point:                      (°F)	Flash Point:                      (°F)
Boiling Point:                   (°F)	Boiling Point:                   (°F)	Boiling Point:                   (°F)
Ignition	Ignition	Ignition
Temperature:                   (°F)	Temperature:                   (°F)	Temperature:                   (°F)
Flammability Limits:	Flammability Limits:	Flammability Limits:
Upper:	Upper:	Upper:
Lower:	Lower:	Lower:
Specific Gravity:	Specific Gravity:	Specific Gravity:
Vapor Density:	Vapor Density:	Vapor Density:
Water Soluble:	Water Soluble:	Water Soluble:
Yes	Yes	Yes
No	No	No
Slight	Slight	Slight

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**FACILITY RESPONSE PLAN**  
**NAVAL AIR STATION CORPUS CHRISTI**

**Outline Note**

This plan section is the actual Facility Response Plan (FRP) for Naval Air Station (NAS) Corpus Christi. It is normally a separate document from the Emergency Response Action Plan (ERAP) and differs substantially, in that it is more of a contingency planning and resource document to be used by the spill management and response teams to train and prepare for a spill. The ERAP is used to implement the FRP when an actual spill occurs. The FRP provides the backup data and calculations for information included in the emergency response section.

The FRP establishes training requirements, spill drill requirements, detailed equipment data, and other resource-type planning data. It should not be thought of as an emergency response plan in the sense that it will be used to direct a spill. This part of the plan is used to prepare for the time when the ERAP will be implemented.

**Facility Response Plan:** This part of the plan contains the basic data and calculations used to develop the ERAP. Much of the FRP data is duplicated in the ERAP, but not in as much detail.

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## 1.0 FACILITY INFORMATION

This section contains facility information that may be used by the regulators to analyze a facility's spill potential. Much of the spill prevention data requested have no direct bearing on spill response and should be more appropriately located in a Spill Prevention, Control, and Countermeasures (SPCC) plan. Where extensive data are requested and they are already contained in other facility plans (Disaster Preparedness plans, SPCC plans, for example), brief summaries of the data should be included in the response plan with references to the detailed source documents.

Table FRP 1.1 Facility Information Quick Reference to NAS Corpus Christi		
Topic		Information
Identification	Name	NAS Corpus Christi
	Owner	U.S. Navy (USN)
	UIC	NAS Corpus Christi
Location	Mailing Address	Commanding Officer Naval Air Station Corpus Christi Corpus Christi, Texas 78419-5021
	Physical Address	Naval Air Station Corpus Christi Nueces County Corpus Christi, Texas
	Location (River Mile, Distance from Known Landmark)	The facility's northern boundary is along Corpus Christi Bay, the western boundary is along Oso Bay, the eastern boundary is along the Laguna Madre, and the southern boundary abutts the township of Flour Bluff.
	County	Nueces County
	Latitude: North	27° 42' 30" North
	Longitude: West	97° 17' 30" West
Phone Numbers (Quarterdeck or Equivalent)	24-hr	(512) 939-2383
	Day	(512) 939-2123
	Fax	(512) 939-3402
Wellhead Protection Area? (Is Facility in or Does it Drain into One?)		Yes, Nueces County

Table FRP 1.1 Facility Information Quick Reference to NAS Corpus Christi		
Topic		Information
Facility Qualified Individual/facility Incident Commander/emergency Response Coordinator	Name	Richard W. Strickler, Capt, USN
	Position	Commanding Officer
	Address	Commanding Officer Naval Air Station Corpus Christi 1101 D Street, Suite 143 Corpus Christi, Texas 78419-5021
	Work Phone	(512) 939-2332
	24-hr Phone	(512) 939-2383
	Specific Training Experience	Not obtained for this printing.
Alternate Facility Qualified Individual/ Deputy Facility Incident Commander/alternate Emergency Response Coordinator	Name	K. White, CDR, USN
	Position	Public Works Officer
	Address	Commanding Officer NAS Corpus Christi 1101 D Street, Suite 143 Corpus Christi, Texas 78419-5021
	Work Phone	(512) 939-3664
	24-hr Phone	(512) 939-2383
	Specific Training Experience	Not provided for this printing
Cognizant Authorities (with City/state in Parentheses)	NAVFAC EFD/EFA	COMNAVRESFOR (New Orleans, LA)
	Regional Incident Commander	G. Clifford, CDR., USN COMNAVRESFOR (New Orleans, LA)
	EPA Region	EPA Region VI (Dallas, TX)
	USCG District	Eighth USCG District (New Orleans)
	USCG COTP	MSO/COTP Corpus Christi

Last updated: JULY 1996

The following table contains information on date of oil storage start-up, current operations, and dates and types of substantial expansion. These requirement have no bearing on present or future response capability for most major Department of Defense installations since the concept of worst-case discharge was not considered in past DoD contingency planning.

Full compliance with this data request may require extensive research of historical plant records. Therefore, the following alternative approach is suggested: List the dates and types of "activity-wide" expansion with appropriate notation of major changes in the oil storage program. For example: 1942 - Established DOD Terminal, four bulk tanks - total storage capacity 400 bbls JP-5; 1954 - Expanded capacity to serve newly constructed Naval Air Station, added 5 tanks with total capacity of 500 bbls JP-4, etc. Further efforts to comply with the proposed requirement do not appear to be justified.

<b>Table FRP 1.2</b> <b>Facility Operations</b> <b>Quick Reference to NAS Corpus Christi — Corpus Christi, TX</b>		
<b>Topic</b>		<b>Information</b>
Date of Oil Storage Start-Up (month/year storage facility began operation)		Prior to 1940
Current Operation (brief description of operations)		<p>NAS Corpus Christi occupies approximately 4,159 acres and supports the operations of aviation activities and units of the U.S. Naval Air training command. Additionally, Corpus Christi Army Depot (CCAD) maintains a mobilization and training base to provide capability for mission support during national emergencies for the U.S. government and foreign nations. CCAD overhauls, repairs, modifies, retrofits and modernizes aircraft systems. CCAD also stores and distributes aeronautical items to perform these activities.</p> <p>JP-5, fuel Oil No. 2, and other petroleum products are transferred to NAS Corpus Christi to support the above missions, via tank truck. Also, JP-5 is supplied to the flight line via tankers. The normal daily throughput is approximately 30,000 gal/day of JP-5. Figures for Fuel oil #2 throughput were not obtained.</p> <p>The equipment and associated facilities used for bulk oil storage and oil transfers at NAS Corpus Christi present high risks for oil spills. For the non-transportation related (NTR) facility part of NAS Corpus Christi, the equipment and facilities of the terminal and the tank truck transfer facility present high oil spill risks. Spills can also happen due to improper operation and maintenance or storage and transfer equipment, flow control equipment, spill containment, drainage control, and as results of other day-to-day operations.</p>
Standard Industrial Classification (SIC CODE) (primary)		9711 (National Security)
Dates and Types of Substantial Expansions of Oil Storage		Not provided
Pipeline Response Zones	N/A	None
<b>A pipeline response zone for OPA 90-regulated pipelines (i.e., DoD owned or operated pipelines leaving the installation's contiguous property) is an off-installation area that can be responded to by the same resources; multiple zones exist only if the installation can't respond to a discharge from any OPA 90-regulated pipeline.</b>		

Last updated: JANUARY 1995

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## TAB 2 — EMERGENCY RESPONSE INFORMATION

### 2.0 EMERGENCY NOTIFICATION PHONE LIST

This list is identical to that required in the ERAP.

<b>Table FRP 2.1</b> <b>Emergency Notification Phone List</b>			
<b>Prioritized Contact List</b>	<b>Response Role</b>	<b>Day Phone</b>	<b>24-Hour Phone</b>
<b>Immediate Response Team Dispatcher</b> <b>Fire Department</b>	First Responders	See ERAP TAB E for List Ext. x3333	See ERAP TAB E for List Ext. x3333
<b>Facility Response/Cleanup Team and Facility Management Team</b>  (See Tab E for names/phone numbers and response times)	Mitigate and Cleanup Spills	See ERAP TAB E for List	See ERAP TAB E for List
<b>Incident Commander</b>  <b>Name: CAPT. Richard W. Strickler, USN</b> <b>Response Time: 30 minutes</b>	Incident Command and Control  Qualified Individual	(512) 939-2332	(512) 939-2383
<b>Deputy Incident Commander</b>  <b>Name: CDR. K. White, USN</b> <b>Response Time: 30 minutes</b>	Assist with incident command and control  Alternate Qualified Individual	(512) 939-3664	(512) 939-2383
<b>NATIONAL RESPONSE CENTER</b>	Receiver of all spill reports and notifier of appropriate FOSC		1-800 424-8802 (202) 267-2675
<b>Texas Reporting: NON-COASTAL</b>  <b>Point of Contact: TMRCC</b>	Reporting requirement for any spill or release into the environment in non-coastal areas		(512) 463-7727
<b>Texas Reporting: COASTAL</b>  <b>Point of Contact: General Land Office</b>	Reporting requirement for any spill or release into the environment in coastal area		1-800 832-8224
<b>Regional Incident Commander</b>  <b>Name: CDR. G. Clifford, USN</b> <b>Response Time: 6-12 hours</b>	Incident command and control of worst-case response  Regional Qualified Individual	(504) 678-5085	(504) 678-5429
<b>EPA Region VI</b>  <b>Point of Contact: EPA Region VI</b>	Incident reporting (follow-up)  (Information is passed to EPA Region VI from NRC.	(214) 665-2222	(214) 665-2222
<b>Oil Spill Cooperative</b> <b>Name: Corpus Christi Area Oil Spill Control Association</b> <b>Point of Contact: Patrick Rennert</b> <b>Response Time: 30 minutes</b>	Provide additional equipment and personnel  Provides response expertise	(512) 882-2656	(512) 882-2656 Cellular (512) 877-8463

<b>Table FRP 2.1</b> <b>Emergency Notification Phone List</b>			
<b>Prioritized Contact List</b>	<b>Response Role</b>	<b>Day Phone</b>	<b>24-Hour Phone</b>
Adjacent Navy/DOD Facilities  Point of Contact: <b>CCAD</b> Response Time: <b>30 minutes +</b>	Provide additional equipment and personnel	<b>(512) 939-3771</b>	<b>(512) 939-3771</b>
Local Response Contractors  Name: <b>NAVSUPSAL</b> (Naval Sea, Supervisor of Salvage)  Point of Contact: <b>Paul Hankins</b> Response Time: <b>Being Developed</b>	Provide additional equipment and personnel  Provides response expertise	<b>(703) 607-2758</b>	<b>(703) 602-7527</b>
Area Committee  Point of Contact: <b>USCG Marine Safety Office Corpus Christi</b>  Note: <b>USCG also FOSC for local area</b>	Incident reporting (follow-up)  (Information is passed to MSO Corpus Christi as FOSC from NRC)	<b>(512) 888-3162</b>	<b>(512) 888-3162</b>
Local Emergency Planning Committee (LEPC)  Point of Contact: <b>David Parrot</b>	Incident reporting	<b>(512) 880-3701</b>	
Local (city/county) Response Team, Fire Department, Hazardous Material (HazMat) Team  Point of Contact: <b>NAS Corpus Christi</b> Response Time: varies	Emergency medical  HazMat response support  Fire suppression support	<b>(512) 939-3333</b>	<b>(512) 939-3333</b>
FEMA  Point of Contact: <b>FEMA</b>	Incident reporting (follow-up)	<b>(202) 274-8105</b>	
Natural Resource Trustee: Federal  Point of Contact: <b>National Park Service</b>	Natural Resource Trustee	<b>(404) 331-4916</b>	<b>(404) 331-6343</b>
Natural Resource Trustee: Federal  Point of Contact: <b>U.S. Fish &amp; Wildlife Service</b>	Natural Resource Trustee	<b>(404) 331-6343</b>	<b>(404) 331-6343</b>
Natural Resource Trustee: Federal  Point of Contact: <b>Secretary of Defense</b>	Natural Resource Trustee: Military lands	<b>(404) 362-7498</b>	<b>(404) 362-7498</b>

**Table FRP 2.1  
Emergency Notification Phone List**

<b>Prioritized Contact List</b>	<b>Response Role</b>	<b>Day Phone</b>	<b>24-Hour Phone</b>
<b>Natural Resource Trustee: Federal</b>  <b>Point of Contact: US Department of Commerce: National Oceanic and Atmospheric Administration (NOAA)</b>	Natural Resource Trustee	(301) 443-8567	(301) 443-8567
<b>Natural Resource Trustee: State</b>  <b>Point of Contact: Texas Natural Resource Conservation Commission: General Land Office</b>	Natural Resource Trustee	(512) 463-5001	1-800 832-8224
<b>Local Response Contractors</b>  <b>Point of Contact: Garrett Construction</b> <b>Response Time: 1-2 hrs</b>	Provide salvage capabilities	(512) 643-7575	(512) 643-7575
<b>Local Response Contractors</b>  <b>Point of Contact: G&amp;H Towing</b> <b>Response Time: 2-4 hrs</b>	Provide tugs	(512) 884-8791	(512) 884-8791
<b>Local Response Contractors</b>  <b>Point of Contact: Hollywood Marine</b> <b>Response Time: 2-3 hrs</b>	Provide tugs	(512) 883-6387	(512) 883-6387
<b>Environmental Interest Group</b>  <b>Point of Contact: National Audubon Society</b>	Contact for representatives of various private users of the bay	(512) 886-5968	(512) 886-5968
<b>Environmental Interest Group</b>  <b>Point of Contact: Earth Save of Corpus Christi</b>	Contact for representatives of various private users of the bay	(512) 991-5156	(512) 991-5156

<b>Table FRP 2.1</b> <b>Emergency Notification Phone List</b>			
<b>Prioritized Contact List</b>	<b>Response Role</b>	<b>Day Phone</b>	<b>24-Hour Phone</b>
Environmental Interest Group  Point of Contact: <b>Gulf Coast Conservation Association</b>	Contact for environmental assessment support	(512) 882-5199	(512) 882-5199
Local (city/county) Response Team, Fire Department, HazMat Team  Point of Contact: <b>Corpus Christi</b> Response Time:	Emergency medical HazMat response support Fire suppression support	<b>911</b> (512) 880-3900	<b>911</b> (512) 880-3900
Local (city/county) Response Team, Fire Department, HazMat Team  Point of Contact: <b>Refinery Terminal Fire Dept.</b> Response Time: <b>30 minutes</b>	Emergency medical HazMat response support Fire suppression support	(512) 822-6253	(512) 822-6253
State Emergency Response Commission (SERC)  Point of Contact:	Incident reporting		
County Environmental Agencies  Point of Contact: <b>Nueces County Beach Services</b>	Incident reporting	(512) 949-7023	(512) 949-7023
County Environmental Agencies  Point of Contact: <b>City of Corpus Christi Health Department</b>	Incident reporting	(512) 851-7273	(512) 851-7273
State Police  Point of Contact: <b>Texas Highway Patrol</b>	Traffic control Evacuation Crowd control	<b>911</b> (512) 854-2681	<b>911</b> (512) 854-2681
Sheriff Department  Point of Contact: <b>Nueces County</b>	Traffic control Evacuation Crowd control Aircraft helicopter, police boat	<b>911</b> (512) 886-2600	<b>911</b> (512) 886-2600

<b>Table FRP 2.1</b> <b>Emergency Notification Phone List</b>			
<b>Prioritized Contact List</b>	<b>Response Role</b>	<b>Day Phone</b>	<b>24-Hour Phone</b>
Local Water Supply System Manager  Point of Contact: <b>None at Risk</b> Response Time:	Secure water supply intakes	<b>None at Risk</b>	<b>None at Risk</b>
Local TV  Point of Contact: <b>KIII TV-13</b>	Broadcast evacuation notices	<b>(512) 854-4733</b>	<b>(512) 854-4733</b>
Local TV  Point of Contact: <b>KORO</b>	Broadcast evacuation notices (Spanish)	<b>(512) 576-5288</b>	<b>(512) 576-5288</b>
Local TV  Point of Contact: <b>KZTV TV-10</b>	Broadcast evacuation notices	<b>(512) 883-7070</b>	<b>(512) 883-7070</b>
Local TV  Point of Contact: <b>KRIS TV-6</b>	Broadcast evacuation notices	<b>(512) 886-6100</b>	<b>(512) 886-6100</b>
Local Radio  Point of Contact: <b>KSIX</b>	Broadcast evacuation notices	<b>(512) 883-7070</b>	<b>(512) 883-7070</b>
Local Radio  Point of Contact: <b>KCTA</b>	Broadcast evacuation notices	<b>(512) 289-0999</b>	<b>(512) 289-0999</b>
Local Radio  Point of Contact: <b>KLTG &amp; KDAE</b>	Broadcast evacuation notices	<b>(512) 882-4394</b>	<b>(512) 882-4394</b>
Local Radio  Point of Contact: <b>KSAB FM</b>	Broadcast evacuation notices	<b>(512) 851-1414</b>	<b>(512) 851-1414</b>
Local Radio  Point of Contact: <b>KNCN FM C-101</b>	Broadcast evacuation notices	<b>(512) 560-5101</b>	<b>(512) 560-5101</b>
Local Radio  Point of Contact: <b>KUNO AM</b>	Broadcast evacuation notices	<b>(512) 851-1414</b>	<b>(512) 851-1414</b>

<b>Table FRP 2.1</b> <b>Emergency Notification Phone List</b>			
<b>Prioritized Contact List</b>	<b>Response Role</b>	<b>Day Phone</b>	<b>24-Hour Phone</b>
Hospital(s)  Point of Contact: <b>Drs. Regional Medical</b>  <b>Note:</b> Some Hospitals may not be set up for in house decontamination. Ensure field De-con prior to transport.	Medical support	(512) 857-1400	(512) 857-1400
Hospital(s)  Point of Contact: <b>Memorial Medical Center</b>  <b>Note:</b> Some Hospitals may not be set up for in house decontamination. Ensure field De-con prior to transport.	Medical support	(512) 881-4000	(512) 881-4000
Hospital(s)  Point of Contact: <b>Naval Hospital</b>  <b>Note:</b> Some Hospitals may not be set up for in house decontamination. Ensure field De-con prior to transport.	Medical support	(512) 939-2685	(512) 939-2685
Hospital(s)  Point of Contact: <b>Southside Community</b>  <b>Note:</b> Some Hospitals may not be set up for in house decontamination. Ensure field De-con prior to transport.	Medical support	(512) 854-2031	(512) 854-2031
Hospital(s)  Point of Contact: <b>Riverside Memorial Hospital</b>  <b>Note:</b> Some Hospitals may not be set up for in house decontamination. Ensure field De-con prior to transport.	Medical support	(512) 526-2321	(512) 526-2321
Hospital(s)  Point of Contact: <b>Spohn Hospital</b>  <b>Note:</b> Some Hospitals may not be set up for in house decontamination. Ensure field De-con prior to transport.	Medical support	(512) 884-2041	(512) 884-2041
Local Weather  Point of Contact: <b>Department of Commerce</b> <b>National Weather Service</b>	Weather forecasts	(817) 334-2652 (512) 289-0604	(817) 334-2652 (512) 289-0604

<b>Table FRP 2.1</b> <b>Emergency Notification Phone List</b>			
<b>Prioritized Contact List</b>	<b>Response Role</b>	<b>Day Phone</b>	<b>24-Hour Phone</b>
Technical Support: Harbor Master  Point of Contact: <b>Port of Corpus Christi</b>	Ship and barge movement	(512) 882-2080	(512) 882-2080
Technical Support: Director of Operations  Point of Contact: <b>Port of Corpus Christi Authority</b>	Ship and barge movement	(512) 882-5633	(512) 882-5633
Technical Support  Point of Contact: <b>Texas Natural Resource Conservation Commission (TNRCC)</b>	Laboratory support	(512) 939-8484	
Technical Support  Point of Contact: <b>Core Labs</b>	Laboratory support	(512) 289-2673	(512) 289-2673
Technical Support  Point of Contact: <b>Analysis, Inc.</b>	Laboratory support	(512) 444-5896	(512) 444-5896
Technical Support  Point of Contact: <b>TX Park and Wildlife Department: Mr. Frank Dickerson</b>	Wildlife Rehabilitation	(512) 289-5566	(512) 289-5566
Technical Support  Point of Contact: <b>USCG National Strike Force Coordination Center</b> Response time. <b>6-12 hours</b>	Coordination of the USCG Strike Teams's response equipment	(919) 331-6000	(919) 331-6000

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## 2.1 Spill Response Notification Form

**Spill Response Notification Form**  
**National Response Center (NRC) 1-800-424-8802**

**Note:** It is not necessary to wait for all information before calling the NRC.

**THIS FORM IS TO BE USED FOR INITIAL NOTIFICATION AND ALL FOLLOW-UP NOTIFICATIONS**  
**ACTION SHOULD BE ASSIGNED BY THE QUALIFIED INDIVIDUAL (QI)**  
**FOR INITIAL AND FOLLOW-UP COMPLETION.**

<b>Table FRP 2.2</b> <b>Spill Response Notification Form</b>	
<b>Reporter Information</b>	
Reporter's Name  Last First	
Reporter's Phone Number	(XXX) XXX-XXXX
Company	
Organization Type	
Position	
Address	Street:
	City:
	State:
	ZIP Code:
Were Materials Released	<input type="checkbox"/> YES <input type="checkbox"/> NO
Confidential	<input type="checkbox"/> YES <input type="checkbox"/> NO
Time Call Received	(use 24-hour time)

**Table FRP 2.2  
Spill Response Notification Form**

Incident Description	
Source and/or Cause of Incident	
Date	
Time of Incident	(use 24-hour time)
Incident Address/Location	
Nearest City	
County	
State	
Zip Code	
Distance from City (miles)	
Section	
Township	
Range	
Container Type	
Tank Capacity (include units)	
Facility Capacity (include units)	
Facility Latitude	___ Degrees ___ Minutes ___ Seconds
Facility Longitude	___ Degrees ___ Minutes ___ Seconds
Weather Conditions	
Material Released	Chemical Hazards Response Information System (CHRIS) Code
<input type="checkbox"/> YES	—
	Quantity Released — (include units)
<input type="checkbox"/> NO	Material Released into Water — <input type="checkbox"/> YES <input type="checkbox"/> NO
	Quantity Released into Water — (include units)

**Table FRP 2.2  
Spill Response Notification Form**

<b>Response Actions</b>	
<b>Actions Taken to Correct Incident</b>	
<b>Actions Taken to Control Incident</b>	
<b>Actions Taken to Mitigate Incident</b>	

**Table FRP 2.2  
Spill Response Notification Form**

<b>Impact</b>	
Number of Injuries	
Number of Deaths	
Evacuation(s) Required	<input type="checkbox"/> YES <input type="checkbox"/> NO
Number Evacuated	
Was There Any Damage	<input type="checkbox"/> YES <input type="checkbox"/> NO
Damage in Dollars (estimated)	
Medium Affected	
Description of Effect	
Additional Information about Medium	
<b>Additional Information</b>  Any information about the incident not recorded elsewhere in the report	
<b>Caller Notifications</b>	
EPA	<input type="checkbox"/> YES <input type="checkbox"/> NO
USCG	<input type="checkbox"/> YES <input type="checkbox"/> NO
SERC	<input type="checkbox"/> YES <input type="checkbox"/> NO
LEPC	<input type="checkbox"/> YES <input type="checkbox"/> NO
RIC	<input type="checkbox"/> YES <input type="checkbox"/> NO
Other (List)	<input type="checkbox"/> YES <input type="checkbox"/> NO
Other (List)	<input type="checkbox"/> YES <input type="checkbox"/> NO
Other (List)	<input type="checkbox"/> YES <input type="checkbox"/> NO
Other (List)	<input type="checkbox"/> YES <input type="checkbox"/> NO

## 2.2 Facility Response Personnel

This section contains the same list of response personnel as that included in the ERAP. However, more in-depth information relative to training, capability, and responsibilities is included. A brief synopsis of contracts, interagency agreements, memoranda of understanding (MOUs), etc. for personnel are presented, see Appendix B for detail.

### Facility Response Personnel Resources

Table FRP 2.3 Facility Immediate Response Team (see note below **)						
Name	Day Phone	24-Hr Phone	Response Time (Min)	Response Job	Training Type	Training Date
<b>NAS Corpus Christi Fire Department Personnel</b>						
Davis, B.	(512) 939-3491	(512) 939-3333	< 30	OSC	OSHA/ RCRA	--
Garcia, A.	(512) 939-3333	"	"	OSC		
Rodriguez, J.	"	"	"	OSC		
Veselka, J.	"	"	"	OSC		
Sayles	"	"	"	See notes	HazMat OPS HazMat TECH	9/93 10/93
Talkington	"	"	"	"	HazMat Ops	9/93
Adams	"	"	"	"	HazMat OPS	9/93
Garza, L	"	"	"	"	HazMat OPS HazMat Tech	9/93 9/91
Waldron	"	"	"	"	--	--
Grigsby	"	"	"	"	HazMat OPS	9/93
De la Pena	"	"	"	"	HazMat OPS	9/93
Trejo	"	"	"	"	HazMat OPS	9/93
Villarreal, V	"	"	"	"	HazMat OPS	9/93
Gonzalez, R	"	"	"	"	HazMat OPS HazMat Tech	9/93 3/93
Esquivel	"	"	"	"	HazMat OPS	9/93

**Table FRP 2.3**  
**Facility Immediate Response Team (see note below \*\*)**

Name	Day Phone	24-Hr Phone	Response Time (Min)	Response Job	Training Type	Training Date
Herrera	"	"	"	"	HazMat OPS	9/93
Cook	"	"	"	"	--	--
Konitzer	"	"	"	"	HazMat OPS HazMat Tech	9/93 12/91
Dominguez	"	"	"	"	--	--
Retault	"	"	"	"	HazMat OPS	9/93
Young	"	"	"	"	HazMat OPS	9/93
F/C Villarreal	"	"	"	"	--	--
F/C Garza, G.	"	"	"	"	HazMat OPS	9/93
Gomez, J.	"	"	"	"	HazMat OPS	9/93
Suniga	"	"	"	"	--	--
Wilkinson	"	"	"	"	--	--
Flores	"	"	"	"	--	--
Escarzaga	"	"	"	"	HazMat OPS HazMat TEC	9/93 7/94
De Leon	"	"	"	"	HazMat OPS	9/93
Thompson	"	"	"	"	HazMat OPS	9/93
Wills	"	"	"	"	HazMat OPS HazMat Tech	9/93 7/94
Jackson	"	"	"	"	HazMat OPS	5/94
Armijo	"	"	"	"	HazMat OPS HazMat Tech	9/93 10/93
Lerma	"	"	"	"	HazMat OPS	9/93

<b>Table FRP 2.3</b> <b>Facility Immediate Response Team (see note below **)</b>						
<b>Name</b>	<b>Day Phone</b>	<b>24-Hr Phone</b>	<b>Response Time (Min)</b>	<b>Response Job</b>	<b>Training Type</b>	<b>Training Date</b>
Serenil	"	"	"	"	HazMat OPS	9/93
Barta	"	"	"	"	--	--
Barza, A.	"	"	"	"	--	--
Rossi P.	"	"	"	"	--	--
Meeuwssen C.	"	"	"	"	--	--
Tobin A.	"	"	"	"	--	--
Spellings M.	"	"	"	"	--	--
Stafford, B.	"	"	"	"	--	--
Canales, O.	"	"	"	"	--	--
Rosales, R.	"	"	"	"	--	--
Terrell, O.	"	"	"	"	--	--
Villasanz, D.	"	"	"	"	--	--
Gonzales, P.	"	"	"	"	HazMat OPS	9/93
Herschbach, E.	"	"	"	"	--	--
Grigsby, J.L.	"	"	"	"	HazMat OPS HazMat Tech	9/93 7/94
Encarnacion, J	"	"	"	"	--	--
Rodriguez, D.	"	"	"	"	HazMat OPS	7/94
Guerra, V.	"	"	"	"	--	--
Viafronco, I.	"	"	"	"	--	--
Espinoza, J.	"	"	"	"	--	--
Mercado., R.	"	"	"	"	--	--
Aranda, R.	"	"	"	"	--	--
Robles, A	"	"	"	"	HazMat OPS HazMat Tech	9/93 7/93
Saenz, F.	"	"	"	"	--	--
Martinez, R.	"	"	"	"	--	--

**Table FRP 2.3**  
**Facility Immediate Response Team (see note below \*\*)**

Name	Day Phone	24-Hr Phone	Response Time (Min)	Response Job	Training Type	Training Date
Plata, M.	"	"	"	"	--	--
Heyne, A.	"	"	"	"	--	--
Rocheftort, R.	"	"	"	"	--	--
Gorena, D.	"	"	"	"	--	--
Saenz, J.	"	"	"	"	--	--
Vella, T.	"	"	"	"	--	-
<b>NAS Corpus Christi Fuel Farm Personnel</b>						
Richard James	(512) 939-3372	(512) 852-2318	< 30	Asst. Haz Coordinator	SCBA PPE C-Spill	6/6/89 7/30/85 7/30/85
Crummley, C.	(512) 939-3372	(512) 939-2980	< 20	Fuel Branch Supervisor	PPE	11/89 12/90
Ami Turnball	(512) 939-6330	(512) 939-4438	< 7	OSC	40 hr HazMat OSHA/ RCRA HAZWASTE	9/27/93 2/94 6/94
Ami Olton	(512) 939-8460	(512) 939-8460	< 20	OSC	Spill School 28 hr HazWaste HazMat Response	11/91 12/91 3/94

<b>Table FRP 2.3</b> <b>Facility Immediate Response Team (see note below **)</b>						
<b>Name</b>	<b>Day Phone</b>	<b>24-Hr Phone</b>	<b>Response Time (Min)</b>	<b>Response Job</b>	<b>Training Type</b>	<b>Training Date</b>
<b>Hazardous Waste/Environmental Support Personnel</b>						
Rudy Ramos	(512) 939-2469	(512) 854-6135	15 min on NAS Corpus Christi	Not obtained	Not obtained	Not obtained
Gilbert Martinez	(512) 939-2469	(512) 664-8522	15 min on NAS Corpus Christi	Not obtained	Not obtained	Not obtained
Reynaldo Guerrero	(512) 939-2469	(512) 853-5707	15 min on NAS Corpus Christi	Not obtained	Not obtained	Not obtained
Enrique Espinosa	(512) 939-2469	(512) 595-4592	15 min on NAS Corpus Christi	Not obtained	Not obtained	Not obtained
Marcus Muniz	(512) 939-2469	(512) 854-6570	15 min on NAS Corpus Christi	Not obtained	Not obtained	Not obtained
Florentino Pena	(512) 939-2469	(512) 884-7422	15 min on NAS Corpus Christi	Not obtained	Not obtained	Not obtained
Ross Ybarra	(512) 939-2469	(512) 851-2025	15 min on NAS Corpus Christi	Not obtained	Not obtained	Not obtained
Mariano Cervantes	(512) 939-2469	(512) 883-9817	15 min on NAS Corpus Christi	Not obtained	Not obtained	Not obtained
Ruben Garcia	(512) 939-2469	(512) 854-1632	15 min on NAS Corpus Christi	Not obtained	Not obtained	Not obtained
Osualdo Canales	(512) 939-2469	(512) 853-1380	15 min on NAS Corpus Christi	Not obtained	Not obtained	Not obtained

<b>Table FRP 2.3</b> <b>Facility Immediate Response Team (see note below **)</b>						
<b>Name</b>	<b>Day Phone</b>	<b>24-Hr Phone</b>	<b>Response Time (Min)</b>	<b>Response Job</b>	<b>Training Type</b>	<b>Training Date</b>
<b>ACCI Personnel, Tank Truck Drivers</b>						
Friend, J.D.	(512) 937-3491	(512) 937-3491	15 min on NAS Corpus Christi	Project Manager ACCI, Full Time	Not obtained	Not obtained
Adams, J.	(512) 937-3491	(512) 937-3491	15 min on NAS Corpus Christi	Service Station, Part Time	Not obtained	Not obtained
Benavides, S.	(512) 937-3491	(512) 937-3491	15 min on NAS Corpus Christi	Driver, Operator, Full Time	Not obtained	Not obtained
Clayton, C.	(512) 937-3491	(512) 937-3491	15 min on NAS Corpus Christi	Driver, Operator, Full Time	Not obtained	Not obtained
Cuellar, P.	(512) 937-3491	(512) 937-3491	15 min on NAS Corpus Christi	Driver, Operator, Full Time	Not obtained	Not obtained
Ewald, F.	(512) 937-3491	(512) 937-3491	15 min on NAS Corpus Christi	Fuel Distribution Systems Operator/ Supervisor, Full Time	Not obtained	Not obtained
Gordon, M.	(512) 937-3491	(512) 937-3491	15 min on NAS Corpus Christi	Dispatcher, Part Time	Not obtained	Not obtained
Giffen, N., Jr.	(512) 937-3491	(512) 937-3491	15 min on NAS Corpus Christi	Driver Operator, Full Time	Not obtained	Not obtained
Hoover, R.	(512) 937-3491	(512) 937-3491	15 min on NAS Corpus Christi	Driver Operator, Part Time	Not obtained	Not obtained
Kehoe, J.	(512) 937-3491	(512) 937-3491	15 min on NAS Corpus Christi	Dispatcher, Part time	Not obtained	Not obtained

**Table FRP 2.3**  
**Facility Immediate Response Team (see note below \*\*)**

Name	Day Phone	24-Hr Phone	Response Time (Min)	Response Job	Training Type	Training Date
Klinge, R.	(512) 937-3491	(512) 937-3491	15 min on NAS Corpus Christi	Cryogenic Distribution Systems Operator, Full Time	Not obtained	Not obtained
Lehmberg, R.	(512) 937-3491	(512) 937-3491	15 min on NAS Corpus Christi	Driver Operator, Full Time	Not obtained	Not obtained
McCorkle, D.	(512) 937-3491	(512) 937-3491	15 min on NAS Corpus Christi	Dispatcher, Part Time	Not obtained	Not obtained
Miller, W.	(512) 937-3491	(512) 937-3491	15 min on NAS Corpus Christi	Driver Operator, Part Time	Not obtained	Not obtained
Morrow, M.	(512) 937-3491	(512) 937-3491	15 min on NAS Corpus Christi	Driver Operator, Full Time	Not obtained	Not obtained
Nazareno, E.	(512) 937-3491	(512) 937-3491	15 min on NAS Corpus Christi	Driver Operator, Part Time	Not obtained	Not obtained
Oxley, L.	(512) 937-3491	(512) 937-3491	15 min on NAS Corpus Christi	Driver Operator, Part Time	Not obtained	Not obtained
Perez, M., Sr.	(512) 937-3491	(512) 937-3491	15 min on NAS Corpus Christi	Driver Operator, Full Time	Not obtained	Not obtained
Perez, M., Jr.	(512) 937-3491	(512) 937-3491	15 min on NAS Corpus Christi	Fuel Distribution System Helper, Full Time	Not obtained	Not obtained
Richison, C.	(512) 937-3491	(512) 937-3491	15 min on NAS Corpus Christi	Driver Operator, Part Time	Not obtained	Not obtained
Robinson, O.	(512) 937-3491	(512) 937-3491	15 min on NAS Corpus Christi	Driver Operator, Full Time	Not obtained	Not obtained

<b>Table FRP 2.3</b> <b>Facility Immediate Response Team (see note below **)</b>						
<b>Name</b>	<b>Day Phone</b>	<b>24-Hr Phone</b>	<b>Response Time (Min)</b>	<b>Response Job</b>	<b>Training Type</b>	<b>Training Date</b>
Sandoval, R.	(512) 937-3491	(512) 937-3491	15 min on NAS Corpus Christi	Cryogenic Systems Operator, Full Time	Not obtained	Not obtained
Scott, I.	(512) 937-3491	(512) 937-3491	15 min on NAS Corpus Christi	Dispatcher, Part Time	Not obtained	Not obtained
Shaffer, J.	(512) 937-3491	(512) 937-3491	15 min on NAS Corpus Christi	Driver Operator, Part Time	Not obtained	Not obtained
Silvas, J.	(512) 937-3491	(512) 937-3491	15 min on NAS Corpus Christi	Driver Operator, Full Time	Not obtained	Not obtained
Smith, W.	(512) 937-3491	(512) 937-3491	15 min on NAS Corpus Christi	Driver Operator, Part Time	Not obtained	Not obtained
Swinnea, R.	(512) 937-3491	(512) 937-3491	15 min on NAS Corpus Christi	Dispatcher, Full Time	Not obtained	Not obtained
Toussaint, M.	(512) 937-3491	(512) 937-3491	15 min on NAS Corpus Christi	Driver Operator, Part Time	Not obtained	Not obtained

**Note:** \*\* NAS Corpus Christi has a limited number of personnel for response and primarily relies on the Fire Department. The Fire Department has a recurring watch list of various Facility Response Personnel positions. The above listing is as of January 1995.

**Table FRP 2.4**  
**Facility Emergency Response/Cleanup Team**

**Note:** NAS Corpus Christi has very limited first responder responsibilities and then only by contract.

Rather than have a specific set of employees as the Facility Response Team, all personnel on duty (i.e., the Fire Department) form an incident-specific response team.

All personnel as assigned will serve as Ground Reconnaissance crews and perform (1) temporary repairs to leaking equipment, (2) use response kits to initiate spill cleanup and (3) keep Operations Section Chief apprised of ability to control/clean up spill or cooperative Response contracted Corpus Christi Area Oil Spill Control Association or other subcontractors, should be called in. They will remain on-scene to control operations until relieved by co-op response personnel or will supplement workers.

Also, security personnel are trained to notify of leaks and take initial actions to stop them.

**Table FRP 2.5**  
**Facility Spill Management Team**

**Note:** NAS Corpus Christi has very limited first responder responsibilities and then only by contract.

Rather than have a specific set of employees to be the Facility Spill Management Team, all personnel on duty (i.e., Fire Department) form an incident-specific Spill Management Team.

See additional notes in Table FRP 2.4.

<p style="text-align: center;"><b>Table FRP 2.6</b> <b>Other Facility Response Personnel</b> (Building Emergency Coordinators, Support Personnel, Logistical Personnel, etc.)</p>
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<p><b>Note:</b> NAS Corpus Christi does not have any other personnel assigned under contract as a resource; therefore, specific information (i.e., name, etc.) is not available.</p>
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<p style="text-align: center;"><b>Table FRP 2.7</b> <b>Available Adjacent Navy/DoD Emergency Response Personnel</b></p>
-----------------------------------------------------------------------------------------------------------------------------

<p><b>Note:</b> Due to constant personnel turnover, DOD Response Teams comprise available individuals. Due to this constant turnover, specific information (i.e., name, etc.) is not available.</p>
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<p>Personnel are available from:</p>
--------------------------------------

- |                                                                                               |
|-----------------------------------------------------------------------------------------------|
| <ul style="list-style-type: none"><li>• NAVSTA Ingleside: (512) 813-3663 (Cellular)</li></ul> |
|-----------------------------------------------------------------------------------------------|

## 2.3 Equipment List

NAS Corpus Christi contracts for the major portion of spill response actions at NAS Corpus Christi (outside of Corpus Christi Army Depot (CCAD) and Hazardous (HAZ) response; i.e., significant oil spills). So, instead of extensive NAS Corpus Christi ownership, response equipment is under contract from the local Cooperative and the Navy Supervisor of Salvage (NAVSUPSALV) for "activation or call-up" during an incident. Additionally, no co-op response equipment is maintained or stage at NAS Corpus Christi. (Corpus Christi Area Oil Spill Association [CCAOSCA] has a final OSRO classification from the USCG: Class B for River & Canal and Class B for Inland & Nearshore environments).

(Note: It should be noted that this section should be periodically reviewed to ensure an adequate inventory is maintained as stocks are consumed.)

### Summary of NAS Corpus Christi Equipment Inventory:

Table	Inventory Item
N/A	Skimmers **
N/A	Vacuum Trucks **
N/A	Booms **
FRP 2.8	Pumping Equipment
FRP 2.9	Sorbents Stockpiled
FRP 2.10	Tools and Supplies
FRP 2.11	Communications Equipment (in use)
N/A	Communications Equipment (stored) **
FRP 2.12	Fire Fighting Equipment
FRP 2.13	Personal Protective Equipment
FRP 2.14	Fire Department HazMat Inventory
N/A	Miscellaneous Capital Equipment **
FRP 2.15	Equipment Available from Nearby DOD Installations
FRP 2.16	Equipment Available from Tier 1 Contractors
FRP 2.17	Equipment Available from Tier 2 Contractors
FRP 2.18	Equipment Available from Tier 3 Contractors

Note: \*\* NAS Corpus Christi has none of the marked equipment noted above (i.e., skimmers, vacuum trucks, booms, stored communication gear, or miscellaneous capital equipment. Instead of NAS Corpus Christi ownership, the equipment is contracted for from CCAOSCA as noted below:

Equipment item	Source
Skimmers	— CCAOSCA contract
Vacuum Trucks	— CCAOSCA contract
Booms (Harbor)	— CCAOSCA contract
Communications	— No extra communications equipment is stored at NAS Corpus Christi.
PPE	— Limited Personal Protective (PPE) Equipments owned by NAS Corpus Christi.
Miscellaneous	— No miscellaneous equipment is owned.

Table FRP 2.8 Onsite Inventory: Pumping Equipment				
Topic		Pump Type 1	Pump Type 2	Pump Type 3
Pumps	Number	4	None	None
	Operating Power (Compressed Air, Electric, etc.)	Compressed Air		
	Nominal Rate (gal/min)	25 gal/min		
	Hose Connection (3/4" Twist-lock, etc.)	1 1/2" Cam Lock		
Manufacture	Brand	Marlow		
	Model	--		
	Year	1988		
Mobilization	Point of Contact Day Phone 24-Hour Phone	Environmental Manager (512) 939-3776 (512) 939-2383		
	Storage Location	Bldg 257		
	Transportation Needed	Scooter		
	Crew Needed	Two (02)		
	Time (Hrs) (Request → in Use)	--		
Upkeep	Operational Status	Operational		
	Inspection Frequency	Weekly		
	Date of Last Inspection	Dec 1994		
Compatible Compressors	Number	N / A		
Compatible Hose	Length (Ft)	Unknown		
Comments: NAS Corpus Christi-own and maintain this equipment.				
Common Navy pumps: Wilden Model M8: comp air, 155 gal/min (delivers 75-100), 3/4" twist-locks.				

Last updated: JANUARY 1995

Table FRP 2.9 Onsite Inventory: Sorbents (Stockpiled)						
Stockpiled Item	National Stock Number	Stockpile Location	Purchase Unit	Sorption Capacity (Gal/unit)	Stock on Hand (Units)	Stocking Goal (Units)
Sorbent Boom (white)	3 M	Fire Department	10" x 20' sections	--	5	
Sorbent Boom (Pink)	--	Fire Department	dike socks	7	22	
Sorbent Mats	--	Fire Department	pads		3 mats	
Sorbent Pad	--	Fire Department	pads	--	150	--
Sorbent Pillow	open purchase	Fire Department	pillows	--	15	
Sorbent Hogs/dike socks (Blue)	--	Fire Department	hogs/socks		26	
Clay Absorbent	--	Bldg 257	50 # bag	--	50 bags	--
Envirogard Oil Absorbent Socks	OB15-4IS	Bldg 257	case: 15 w/4' sock	--	15 cases	--
Envirogard Oil Absorbent Sox	OB15-10LS	Bldg 257	case: 15 w/10' sock	--	6 cases	--
Envirogard Spill Kleen Acids, Bases	SK10-4	Bldg 257	carton: 10 w/4' sox	--	100	--
Enviroguard Spill Keen Granules	--	Bldg 257	drum: 40 lbs	--	16	--
Envirogard Fume-Away	FC-38 (Fume / Gas absorbent)	Bldg 257	can: 36 lbs	--	36	--
Safe Step	--	Bldg 257	bag: 40 lbs	--	40	--
Sodium Bicarbonate	--	Bldg 257	bag: 40 lbs	--	25	--
TOTAL SORPTION CAPACITY ON HAND (GAL): --						
Point of Contact: Environmental Manager Day Phone: (512) 939-3776 24-Hour Phone: (512) 939-2383						
Comments: Stockpiles are replaced on a "as used basis" to maintain inventories.						
Given sorption capacities per purchase unit and number of units on hand, this table has math capability to calculate the total sorption capacity on hand.						
Purchase of expendibles is ongoing; stocks are replenished as needed, so year of purchase information is unavailable.						

Last updated: JANUARY 1995

Table FRP 2.10 Onsite Inventory: Tools and Supplies (Stockpiled)					
Stockpiled Item	National Stock Number	Stockpile Location	Unit	Stocking Goal (Units)	Stock On Hand (Units)
Rope, 3/8" Nylon	4020-00-946-0436		roll		
Rope, 1/2" Nylon	4020-00-106-9361		roll		
Rope, 3/4" Nylon	4020-00-141-7152		roll		
Rope, 3/8" Manila	4020-00-834-0708		coil		
Rope, 1/2" Manila	4020-00-238-7732		coil		
Rope, 3/4" Manila	4020-00-238-7734		coil		
Parachute Cord	4020-00-246-0688		sl		
Shovel, Sq Nose (Long)	5120-00-293-3330		each		
Shovel, Sq Nose (Short)	5120-00-224-9326	Fire Department	each	2	
Shovel, Rd Nose (Long)	5120-00-188-8450		each		
Shovel, Rd Nose (Short)	5120-00-293-3336		each		
Mop Squeezer	7920-00-170-5449	Bldg 257 Whse	each	2	2
Mop, Cotton	7920-00-224-8726	"	each	5	5
Squeegee	-		each		
Can, Garbage (30-gal)	7240-00-160-0440	"	each	1	1
Rags	7920-00-223-1014	"	50 lb bale	1	1
Pail, Plastic (3-gal)	7240-00-246-1097	"	each	1	1
Pail, Plastic (5-gal)	7240-00-943-7105		each		
Bags, Sand	8105-00-965-2509		bale		
Gloves, Rubber	8415-00-935-2833		pair		
Goggles, Plastic	8465-01-004-2893		pair		
Bags, Plastic (large)	8105-01-183-9768	Fire Department	box	85 bags	
Point of Contact: Environmental Manager Day Phone: (512) 939-3776 24-Hour Phone: (512) 939-2383					
Comments: NAS Corpus Christi does not stock pile hand tools in one location. Instead, the above listed items are available from various activities: Public Works, Corpus Christi Army Depot, Vehicle Maintenance, etc. and are to numerous to list.					
Purchase of tools and supplies is on-going; stocks are replenished as needed, so year of purchase information is unavailable.					

Last updated: JULY 1996

<b>Table FRP 2.11</b> <b>Onsite Inventory: Communications Equipment (in use)</b>						
Type	Assigned to	Call Sign or Phone Number	Primary Network or Frequency	Brand and Model (Year, if Available)	Charger or Storage Location	Op Status
Hand-held Radios	Fire Dept: Company Officer			Johnson (20)	Bldg 1742	Operable
	"			GE (15)	NAS Fire Station	Operable
	Environmental Office			Motorola	Bldg 257	Operable
	Warehouse			HT-1000	Bldg 257	Operable
	Haz Waste Manager				Bldg 257	Operable
	Handlers (4 Each)				Bldg 257	Operable
Car/truck Radios	All Fire Vehicles			Johnson		
Base Station Radios	Fire Station		Corpus	Motorola	Fire Station	Operable
Cellular Phones	Fire Chief	(512) 850-0619	na	FUJITSU Commander Serial 82BDD29D	Fire Station	Operable
Other:						
Point of Contact: Environmental Manager Day Phone: (512) 939-3776 24-Hour Phone: (512) 939-2383						
Comments: Fire Department Has 21 Additional Radios in Use.						
Additional note: It is not known if NAS Corpus Christi maintains any additional stored communications equipment.						
<b>WARNING: ONLY "INTRINSICALLY SAFE" HAND-HELD RADIOS AND RECHARGEABLE BATTERY PACKS SHOULD BE USED AT OIL SPILLS. A radio is "intrinsically safe" only if BOTH the radio and battery pack are "intrinsically safe."</b>						
This inventory table functions both as an Onsite Inventory and as part of the Communications Plan.						
"Intrinsically safe" Motorola hand-held radios and battery packs are marked with green dots on the back, at the junction of the radio body and its battery pack; if BOTH dots are not present, the radio is not "intrinsically safe."						

Last updated: JANUARY 1996

**Table FRP 2.12  
Onsite Inventory: Fire Fighting Equipment**

<b>Equipment</b>	<b>How Many</b>	<b>Type</b>	<b>Brand and Model</b>	<b>Year</b>	<b>Storage Location</b>	<b>OP Status</b>
Fixed Foam System	1	Foam (AFFF)	Not obtained		Fuel Farm: Tanks and Fuel Stand	Charged
Other Fire Trucks	8	Crash Rescue	Not obtained		Fire Department	Operable
	3	Fire Trucks	1,000 gal/min		Fire Department	Operable
	1	Hook and Ladder			Fire Department	Operable
Other:	2	Pump Stations	Pumping Facilities: North: 2,500 gpm 1,000 gpm 3,600 gpm 3,000 gpm 3,660 gpm  South: 3,600 gpm 1,500 gpm			
	2	Water Supplies	UST: 2.0 million gallons  Elevated tank: 500,000 gallons			
Point of Contact: <b>Environmental Manager</b> Day Phone: (512) 939-3776 24-Hour Phone: (512) 939-2383 <b>Fire Department</b> Day/24-Hour Phone: (512) 939-5333						
Comments: 12 Structural specialists, 6 crash specialists, and 1 supervisor on duty 24 hours/day.						

Last updated: JANUARY 1996

Table FRP 2.13 Onsite Inventory: Personal Protective Equipment								
Gear	Level of Protection				How Many	Storage Location	OP Status	
	A	B	C	D				
SCBA Respirator	X				12	Bldg 259		
SAR Respirator W/Escape SCBA	X							
Moon Suit	X							
Inner Chemical-Resistant Gloves	X							
Chemical-Resistant Boots/Shoes	X				11 Env ** Note	Personal Assigned item		
Hard Hat	X				11	Personal Assigned item; Bldg 259		
Chemical Resistant Clothing		X			2 Env 25 F.D.	Bldg 259		
Outer Chemical-Resistant Gloves		X			24	Bldg 259		
Full-Face Canister Respirator			X		11	Personal Assigned Item Building 259		
Safety Goggles				X	20	Bldg 259		
Other:	X				6 Chemtex Suites	Fire Department	Operable	
Other								
Point of Contact: Day Phone: 24-Hour Phone								
Comments: Note: The Fire Department has a completely outfitted HazMat Truck with an extensive inventory; see following lists following this page.								
Purchase of many of these items is ongoing; stocks are replenished as needed, so year of purchase information is unavailable.								
LEVEL A PROTECTION:		LEVEL B PROTECTION:		LEVEL C PROTECTION:		LEVEL D PROTECTION:		
respiratory	max	respiratory	max	respiratory	medium	respiratory	none	
eye	max	eye	max	eye	max	eye	medium	
skin	max	skin	medium	skin	medium	skin	minimal	

Last updated JANUARY 1995

**Table FRP 2.14 Fire Department HazMat INVENTORY**

**Note:** NAS Corpus Christi's Fire Department's HazMat INVENTORY LIST follows this page. This List should be verified periodically.

**Note:** List of 3/31/94 consists of five pages.

HAZMAT INVENTORY LIST

## COMPARTMENT # 1

## TOP SHELF:

- 1 - Wet / Dry Vacuum Cleaner w/ attachments
- 2 - 50' sections water hose
- 3 - Decon kiddie pools 50" diameter x 9" high
- 1 - Black & Decker saw in black box
- 1 - Decon Valve (2 1/2" cap with faucet welded on to get water from truck to decon area.)
- 1 - Box miscellaneous valves and pipe connections
- 3 - Empty 5 gallon buckets for decontamination
- 3 - Decon brushes and handles (blue and white)

## Bottom shelf:

- 1 - 5 gallon bucket Plug N Dike
- 4 - Plug N Dike jars (ready mixed) small
- 3 - Pig Putty Tubes (small)
- 1 - Pipe Patch Kit (black box)
- 1 - Hazmat Response Kit Series "AE" (for plugging & patching drums)
- 1 - Hazmat Response Kit Series "C-1" (for plugging pipes)
- 1 - Aluminum Plate 1 1/2" x 7"
- 2 - Bags Particulate (expands when contacts spilled product)
- 3 - Large Pipe Patch Clamps
- 6 - Small absorbent socks (white)
- 1 - Spool Cotton Rope - 1/2" diameter 600'
- 1 - Spool Nylon Rope - 1/2" diameter
- 1 - Spool Manila Rope - 3/8" diameter 600'

## COMPARTMENT # 2

## TOP SHELF:

- 1 - Hand operated chemical pump
- 1 - Small hand axe (with leather cover)
- 1 - Large axe
- 1 - Small bolt cutters (blue and red handle)
- 1 - Large bolt cutters (green/black)
- 1 - Sledge Hammer (yellow head)
- 2 - Brass Sledge Hammers (Ampco Co.)
- 1 - Crash axe (blue head / black handle)
- 1 - Box Brass tools (Ampco) - 4 double box end wrenches, 10" crescent wrench, wire brush, slipjoint pliers, claw hammer, scraper (putty knife), small knife, phillips screwdriver, pliers, pry bar, and 14" pipe wrench.
- 1 - Aluminum Drum Dolly
- 1 - Grey tool box - 3/8" drive socket set
- 1 - Grey tool box - 1/2" drive socket set
- 3 - plastic dust pans

## BOTTOM SHELF:

- 2 - Boxes large plastic bags
- 1 - Box small plastic bags
- 1 - Plastic drip pan
- Bags absorbent material (speedy dry)



# HAZMAT TRUCK INVENTORY LIST (CONTINUED)

## COMPARTMENT # 3

### TOP SHELF:

- 1 - Sealed Pack (silver packaging) with 3 white coveralls
- 1 - Sealed Pack (silver packaging) with 3 white coveralls
- 1 - Sealed Pack (silver packaging) with 2 white coveralls
- 10 - Durafab Coveralls (large) yellow - no hood, boots, or gloves attached
- 9 - Durafab Coveralls (X-Large) yellow - no hood, boots, or gloves attached
- 1 - Durafab suit (white) - SCBA to be worn inside suit
- 3 - Flash Covers (2 XL and 1 large) Fyrepel Approach Garment  
Approximately 7 oz aluminized 60Z Kevlar / 40Z PBI  
(2 XL are complete / 1 Large missing one foot cover)
- 1 - Chemrel Level B-1 Suit
- 3 - Tyvek Suits (with hood and booties for LEVEL B or C)
- 11 - Saranex Suits (XL - white with hood and booties attached)
- 1 - Box of thin wipes
- 2 - 50' garden hoses (grey - behind suits on top shelf)

### BOTTOM SHELF:

- 25 - Tyvek Suits (White XL with hood and booties) in sealed box
- 6 - Chemtex Suits / rubber suits with hood (green 4 LARGE / 2 MED)  
Polyamide 20Z / PVC 80Z Oil/Grease/Acid Proof  
Bata Shoe Co., Inc. / Industrial Products  
Belcamp, Mo 21017 1-800-372-2282
- 10 - Plastic drop cloths - 9' X 12'
- 21 - pairs disposable boots (yellow / Large) style 2513  
Salem, Oregon Phone- 503-393-4936 FAX 503-393-0967
- 6 - pair Toxicological gloves (for toxicological agents) 2 Large; 4 XL  
test date - 9/90 (3 pairs in boxes/ 3 pairs loose)
- 1 - pair Edmont Scorpio gloves (green - Medium)
- 3 - pair Industrial gloves (Acid and Alkali resistant)
- 3 - boxes disposable gloves (LARGE)
- 1 - box disposable gloves (XL)
- 1 - box disposable gloves (MEDIUM)
- 39 - Silver Shield Glove covers 18 pair medium; 21 pair large
- 3 - pair disposable foot covers (medium - clear) inspected; tested 8/92
- 2 - Rubber coated laboratory aprons  
Southeastern Regional Workshops Inc. - 401 Monroe Avenue  
Ronceverte, W. Virginia NSN # 8415-00-634-5023  
Content # GS-015-08343 LAB-SAFE
- 1 - box small plastic bags
- 3 - rolls green duct tape (to tape up suits)
- 2 - Flashlights with cones for signalling

# HAZMAT TRUCK INVENTORY LIST (CONTINUED)

## COMPARTMENT # 4

- Cascade System - to fill SCBA bottles
- 4 - Cylinder covers for the air banks
- 6 - Spare SCBA bottles (4500 psi)

## COMPARTMENT # 5

- 2 - Large plastic shovels (green)
- 2 - Metal shovels (black with red handle)
- 3 - Heavy duty large straw bristle brooms (for speedy dry)
- 1 - Regular kitchen straw broom
- 4 - Wide brooms (small green and brown bristles)

## COMPARTMENT # 6

- 1 - Box cool packs (18 count)
- 1 - Box cooling vests (4count)
- 1 - Wooden backboard
- 1 - Aluminum Folding Backboard with straps
- 1 - Miller board
- 10 - Small traffic cones
- 2 - Wide brooms (small green and brown bristles)

## COMPARTMENT # 7

- 9 - LEVEL A Suits Lifeguard (6 large / 3 medium) Butyl Rubber
- 1 - Ranger Firemaster Boots w/ steel toe (size 13)
- 4 - Firewalker Boots "Ranger" w/ steel toe (sizes 10, 11 1/2, 12, 12)
- 2 - Miller Boards

## COMPARTMENT # 8

- 2 - Packages "Pig Mat" absorbent mat (100 ct / 16 1/2" x 20")
- 1 - Package Sorbent Pads - white ( 100 ct / 18" x 18") non- aggressive for hydro-carbon
- 3 - Bags Sodium Bicarbonate Industrial (50 lb bag)
- 3 - Absorbent pillows (non - aggressive)
- 1 - Drum thief and sampling kit (blue container)



# HAZMAT TRUCK INVENTORY LIST (CONTINUED)

## COMPARTMENT # 9

- 1 - SO2 (Sulfur Dioxide) Emergency Repair Kit (1 ton Cylinders)
- 1 - Chlorine Emergency Repair Kit (for 1 ton cylinder)
- 1 - Chlorine Emergency Repair Kit (for 150 lb cylinder)
- 4 - Booms (8" x 10' long) 1 in each plastic bag
- 1 - Sock (pink) 6" x 10' long
- 2 - Bags of absorbent flake (pink)
- 13 - Socks - 3" x 4' long (pink) in 1 bag
- 8 - Socks - 3" x 4' long (pink) in 1 bag
- 10 - Absorbent Pillows approximately 18" x 17" (pink)

## COMPARTMENT # 10

- HAZMAT TRUCK Generator and switch box (Cummins Generator) with ground cable  
and ground set tool Volts - 120 / 240                      Amps - 25
- 1 - 1 to 4 outlet electric adapter

## SMALL COMPARTMENT                      (Rear of Truck)

-EMPTY-

## INSIDE TRUCK - GLASS COMP. TOWARD CAB

- 20 - "Emergency Personnel" vests
- 9 - "Hazmat Team" vests
- 2 - "Liason Officer" vests
- 2 - "Information Officer" vests
- 2 - "Incident Commander" vests
- 2 - "Safety Officer" vests
- 1 - Hazmat Kit - Draeger Gas Detector (orange box)
- 1 - Box Draeger Tubes
- 1 - Blue "Command Post" marker
- Several maps and ICS chart

## TOP SHELF:                      INSIDE TRUCK - GLASS COMP. (LEFT REAR)

- 1 - First Aid Kit (red & white box)
- 1 - First Aid Kit (olive colored box)
- 2 - Packages Kimberly Clark Kimtex Wipes
- 4 - Plastic Blankets (56" X 84")
- 1 - Package inspection tags (for use as ID tags)
- 1 - Stifneck extrication collar
- 6 - Scott Respirator Adapters for twin cartridges
- 3 - Pair Chemical Cartridges (for Chlorine, Hydrogen Chloride, Sulfur Dioxide, Formaldehyde, Chlorine Dioxide, Dusts, Fumes, Mists, Radionuclides, Radon Daughters, and for escape from Hydrogen Sulfide.
- 3 - Pair Chemical Cartridges for Ammonia, Methylamine, Dusts, Fumes, Mists, Radionuclides, and Radon Daughters.
- 2 - Pair Chemical Cartridges for Organic Vapors



**BOTTOM SHELF:**

- 1 - roll "Fire Scene Do Not Cross"
- 1 - roll " Caution " tape (small roll)
- 1 - roll "Hazardous Material Exposure Area"
- 1 - roll "Caution - Hazardous Material"
- 1 - roll "Security Line Do Not Cross"
- 10 - Yellow disposable bags
- 2 - New goggles (in boxes)
- 5 - Used goggles (1 has no strap)
- 2 - Squeegee spare rubbers
- 1 - Absorbent sock (blue)
- 2 - Tubes Spillyter Chemical Classifier for hazardous liquids
- 2 - Radios for communication systems on SCBA's
- 3 - Interface Cables for communication system

**INSIDE TRUCK ON SIDE SHELVES**

- 2 - Decontamination Pools (in box)
- 2 - Fyrepel Level A Suits (in yellow canisters)
- 2 - Interceptor Level A Suits (in boxes)
- 4 - Scott SCBA's 4.5 (1 hour air packs in cases)

**FRONT SHELF INSIDE ABOVE GLASS COMPARTMENT (TOWARD CAB)**

- 1 - Red tool Box (locked)
- 1 - Roll plastic sheeting 16' X 100' long
- 3 - MSDS books
- 1 - Book "Emergency Handling of Hazardous Materials"
- 1 - Book "Dangerous Properties Of Industrial Materials"
- 1 - Black binder "Oil Spill Control Plan N.A.S."
- 1 - Black binder " Hazardous Substance Spill Contingency Planning Manual"
- 1 - 1990 EMERGENCY RESPONSE GUIDEBOOK
- 2 - 1987 EMERGENCY RESPONSE GUIDEBOOKS
- 1 - NIOSH POCKET GUIDE TO CHEMICAL HAZARDS
- 1 - Firefighters Handbook Of Hazardous Materials



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Table FRP 2.15 Equipment Available from Nearby DoD Installations			
Topic		Installation 1	Installation 2
Name of Installation		NAVSTA INGLESIDE	
24-Hour Phone		(512) 813-3663	
Location of Installation		Naval Station Ingleside	
Response Time (Hr)		Varies	
Self-Supporting Strike Teams Available	Booming (Boom-Anchors-Boats- Crew)	Available Equipment:  Utility Boat Work Boat Platform Permanent Boom: 4,500' Class II Boom: 12,000' Boom Mooring System	
	Skimming (Skimmer/Crew/Bladder)	See Comments	
	Onshore Recovery (Vac Truck/Crew)	See Comments	
	Shoreline Cleanup (Crew/Super Vision/Equip)	See Comments	
Agreement (written, informal, etc.)		CNATRA INST 5090.2 dts 08DEC92	
Comments:		This information was obtained from CNATRA INSTRUCTION 5090.2 dtd 08 Dec 1992. All plan users should verify that this is the latest update/availability of equipment support.	
Strike Team availability is stated in terms of the basic equipment (i.e., a booming Strike Team stated as "1,000 ft" would mean that 1,000 ft of boom and all necessary support were available).			

Last updated: JANUARY 1995

Table FRP 2.16 Equipment Available from Tier 1 Contractors			
Topic		Contractor 1	Contractor 2
Name of Contractor		Corpus Christi Area Oil Spill Control Association	NAVSUPSALV
24-Hr Phone		(512) 882-2656	(703) 607-2758
Nature of Contractor (Private Company, Co-op, Navy, etc.)		CO-OP	NAVY
Location of Equipment		See comments	Williamsburg, VA
Response Time (Hr)		See comments	Being developed
USCG OSRO Information	Level Rated	B	Not rated
	OP Environments Rated	R/C I/N	Offshore/Open Ocean
	Containment Boom (Ft)	R/C or I/C: 12,000 ft	42" (1980 x5)
	Protective Boom (Ft)	See Comments	0
	Oil Recovery (bbl/day)	1,250	829,206
	Temporary Storage (bbl)	2,500	894,000
Strike Teams Available	Booming (Boom-Anchors-Boats-Crew)	See comments	31 Boom Mooring System 8 Boom Handling Boats (24 ft 260 hp Diesel) 2 Boom Tending Boats (19 & 23 ft inflatable) 4 Boom Tending Boats (18 ft Rigid Hull)
	Skimming (Skimmer/Crew/Bladder)	See comments	10 Skimmer Vsl Sys. (36' Aluminum Hull) 1 Skimmer System (Sorbent Belt VOSS) 2 Skimmer System (Screw Pump VOSS) 1 Skimmer, Sorbent Rope Mop (36 ft)
	Onshore Recovery (Vac Truck/Crew)	See comments	0
	Shoreline Cleanup (Crew/Super Vision/Equip)	See comments	0
Contract	Number	See FRP Appendix B	See FRP Appendix B
	Nature (Boa, Co-op agreement, etc.)	CO-OP	NAVY
	Response Mandatory?	YES	YES
Comments:		For details of Response Capabilities see Table ERAP F.10 and see FRP Appendix B for contract.	See FRP Appendix B for details of equipment and response capability (will be provided in future revision).
<p>The USCG Oil Pollution Act of 1990 Update issues include a list of currently rated OSROs. For USCG-rated OSROs, this table gives the contractor's level (A → E) and operating environments, then it lists the MINIMUM capacities of the contractor's strike teams in this installation's operating environment (taken from Table ERAP F.12, OSRO Capability Minimums).</p> <p>R/C = rivers/canals I/N = inland/nearshore (coastal) GL = Great Lakes</p>			

Last updated: JANUARY 1995

**Table FRP 2.17**  
**Equipment Available from Tier 2 Contractors**

Topic		Contractor 1	Contractor 2
Name of Contractor		Corpus Christi Area Oil Spill Control Association	NAVSUP SALV
24-Hr Phone		(512) 882-2656	(703) 607-2758
Nature of Contractor (Private Company, Co-op, Navy, etc.)		CO-OP	NAVY
Location of Equipment		See comments	Williamsburg, VA
Response Time (Hr)		See comments	Being determined
USCG OSRO Information	Level Rated	B	Not rated
	OP Environments Rated	R/C I/N	Offshore/Open Ocean
	Containment Boom (ft)	R/C or I/C: 12,000 ft	42' (1980 x5)
	Protective Boom (ft)	See comments	0
	Oil Recovery (bbl/day)	1,250	829,206
	Temporary Storage (bbl)	2,500	894,000
Strike Teams Available	Booming (Boom-Anchors-Boats-Crew)	See comments	31 Boom Mooring system 8 Boom Handling Boats (24 ft 260 hp Diesel) 2 Boom Tending Boats (19 & 23 ft inflatable) 4 Boom Tending Boats (18 ft Rigid Hull)
	Skimming (Skimmer/Crew/Bladder)	See comments	10 Skimmer Vsl Sys. (36' Aluminum Hull) 1 Skimmer System (Sorbent Belt VOSS) 2 Skimmer System (Screw Pump VOSS) 1 Skimmer, Sorbent Rope Mop (36 ft)
	Onshore Recovery (Vac Truck/Crew)	See comments	0
	Shoreline Cleanup (Crew/Super Vision/Equip)	See comments	0
Contract	Number	See FRP Appendix B	See FRP Appendix B
	Nature (Boa, Co-op Agreement, etc.)	CO-OP	NAVY
	Response Mandatory?	YES	YES
Comments:		For details of Response Capabilities see Table ERAP F.10 and see FRP Appendix B for contract.	See FRP Appendix B for details of equipment and response capabilities (will be provided in future revision when available).
<p>The USCG Oil Pollution Act of 1990 Update issues include a list of currently rated OSROs. For USCG-rated OSROs, this table gives the contractor's level (A - E) and operating environments, then it lists the MINIMUM capacities of the contractor's strike teams in this installation's operating environment (taken from Table ERAP F.12, OSRO Capability Minimums).</p> <p>R/C = rivers/canals I/N = inland/nearshore (coastal) GL = Great Lakes</p>			

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Table FRP 2.18 Equipment Available from Tier 3 Contractors			
Topic		Contractor 1	Contractor 2
Name of Contractor		NAVSUPSALV	
24-Hr Phone		(703) 607-2758	
Nature of Contractor (Private Company, Co-op, Navy, etc.)		NAVY	
Location of Equipment		Williamsburg, VA	
Response Time (Hr)		11.5	
USCG OSRO Information	Level Rated	Not rated	
	Op Environments Rated	Offshore / Open Ocean	
	Containment Boom (ft)	42" (1980 x 5)	
	Protective Boom (ft)	0	
	Oil Recovery (bbl/day)	829,206	
	Temporary Storage (bbl)	894,000	
Strike Teams Available	Booming (Boom-Anchors-Boats-Crew)	31 Boom Mooring system 8 Boom Handling Boats (24 ft 260 hp Diesel) 2 Boom Tending Boats (19 & 23 ft inflatable) 4 Boom Tending Boats (18 ft Rigid Hull)	
	Skimming (Skimmer/Crew/Bladder)	10 Skimmer Vsl Sys. (36' Aluminum Hull) 1 Skimmer System (Sorbent Belt VOSS) 2 Skimmer System (Screw Pump VOSS) 1 Skimmer, Sorbent Rope Mop (36 ft)	
	Onshore Recovery (Vac Truck/Crew)	0	
	Shoreline Cleanup (Crew/Super Vision/Equip)	0	
Contract	Number	See FRP Appendix B	
	Nature (Boa, co-op agreement, etc.)	NAVY	
	Response Mandatory?	YES	
Comments:		See FRP Appendix B for details of equipment and response capability (will be provided in a future revision).	
<p>The USCG Oil Pollution Act of 1990 Update issues include a list of currently rated OSROs. For USCG-rated OSROs, this table gives the contractor's level (A → E) and operating environments, then it lists the MINIMUM capacities of the contractor's strike teams in this installation's operating environment (taken from table 2-6, OSRO Capability Minimums).</p> <p>R/C = rivers/canals I/N = inland/nearshore (coastal) GL = Great Lakes</p>			

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## 2.4 Dispersants

The Navy is researching the use of nonmechanical oil recovery techniques. However, current Navy policy prohibits the use of nonmechanical oil recovery methods. If this policy should change, this plan will be updated to address the additional capabilities and resource impacts.

## 2.5 Evacuation Plans

The purpose of this section is to assist the Incident Commander (IC) in determining when and under what circumstances an evacuation should be ordered. See ER AP, Appendix G for information on evacuations.

<b>Table FRP 2.19 Evacuation Alerting</b>			
<b>Organizations to Be Alerted If an OPA 90 Facility Is Evacuated</b>		<b>Day Phone</b>	<b>24-Hr Phone</b>
NAS Corpus Christi	1. Safety Department	(512) 939-2385	Not provided
	2. NAS Corpus Christi Quarterdeck	(512) 939-2383	(512) 939-2383
	3. M.B. Gemender, CDR, USN	(512) 939-3664	(512) 939-2383
Local Authorities (law enforcement, fire, emergency planning, etc.)	1. Emergency Management Office	(512) 880-3700	(512) 880-3700
	2. Fire Department Preparedness	911 or x3333	911 or x3333
	3. Corpus Christi Police	911	911
Nearby Institutions	1. Flour Bluff High School	(512) 937-2635	--
	2. Naval Hospital Command Officer	(512) 939-2685	--
Radio Stations	1. KEYS Radio (English)	(512) 882-74111	(512) 882-7411
	2. KCCT (Spanish)	(512) 289-0999	(512) 289-0999
Television Stations	1. KIII-TV (English)	(512) 854-4733	(512) 854-4733
	2. KORO-TV (Spanish)	(512) 883-2823	(512) 883-2823

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Table FRP 2.20 Evacuation Plans: NAS Corpus Christi, Corpus Christi, Texas		
Topic		Discussion of Key Facts (of Use During an Emergency)
Hazardous Substances (with toxicity or volume to possibly trigger facility evacuation)	Inventory	This facility's northern boundary is along Corpus Christi Bay, the western boundary is along OSO Bay and the eastern boundary is along the Laguna Madre. It stores over 2.0 million gallons of petroleum products in aboveground and underground storage tanks (AST/USTs).
	Probable Spill Flow Pathways	Most spilled fuel will be contained by dike systems. Fuel that escapes the dikes will flow into the ditch systems on base, go into the groundwater or may eventually make it to open water. Any groundwater contamination would flow to either the northwest or north depending on the location.
	Hazards to Personnel	JP-5 and Fuel Oil No. 2 are flammable liquids that presents inhalation and skin contact hazards.
	Wind Conditions Affecting Hazards	Vapors from JP-5/Fuel Oil No. 2 will be dispersed down wind. All personnel should be kept upwind of spilled fuel oil. Buildings located downwind of large spills may need to be evacuated. This decision will be made after evaluating existing conditions. Spills on water may be affected by high wind speeds.
	Water Conditions Affecting Hazards	JP-5/Fuel Oil No. 2 are lighter than water, so fuel that enters the water will spread in the direction of flow on Corpus Christi Bay, OSO Bay, or the Laguna Madre and fuel that impacts an aquifer will flow on top of the water table.
Evacuation Initiation	Who Declares Evacuation	The IC/NOSC will determine when an evacuation of part or all of NAS Corpus Christi is required. The IC, in consultation with the FOSC and state officials, will determine when an evacuation of the community surrounding NAS Corpus Christi is required.
	How Surrounding Area Alerting Initiated	The community surrounding NAS Corpus Christi will be notified for evacuation by local and state police.
	How Facility Alerting Initiated	Facility personnel will be notified by NAS Corpus Christi Security.
	Methods of Alerting Facility Personnel	Not available
	Alarm/Siren Locations	Not available
	Estimated Facility Evacuation Time	Not determined.
Onsite Resources	"Safe Haven" Locations	There are no Safe Havens on NAS Corpus Christi.
	Emergency Breathing Gear Locations	None
Disaster Response	Fire/Ambulance Arrival Route	Via North Gate and roads
	Medical Facility for Injured	Primary - NAS Corpus Christi Naval Hospital, (512) 939-2685 Secondary - Doctors Regional Medical Center, (512) 857-1400
	How Injured Will Be Transported	Ambulance Service, 911 or 3333 Halo Flight-Air Medivac, 911 or 3333
Initial Staging Areas in Facility	Where	The initial staging area is the Fire Department.
	How Personnel are Accounted For	The supervisor is responsible for accounting for NAS Corpus Christi personnel and visitors.
Evacuation Routes Out of Facility	How Posted in Facility	Evacuation routes are posted in each building on NAS Corpus Christi.
	Routes (primary)	The primary evacuation route is through main gate.
	Routes (secondary)	Other gates may be open at the time of the incident.
Safe Staging Area(s) Outside Facility	Location of Area(s)	The areas outside the North Gate.
	Route from Facility (primary)	Proceed out the North/South gate depending on the wind and the location of the hazard.
	Route from Facility (secondary)	Information not provided
	How Personnel are Accounted For	Personnel will be logged out of/into of staging area by supervisor of responding units.
Command Center	Where	Mobile (Fire Department)
	Communications Capabilities	Communications capabilities are described in FRP TAB 10.
Comments:		

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## 2.6 Qualified Individual's Duties

Under the Navy's two-tiered planning concept, the Qualified Individual (QI) has full authority and the duty, as described below, to respond to facility oil and hazardous substance spills, until relieved by the Regional QI/Regional IC. As outlined in the Natural Oil and Hazardous Substances Contingency Plan (NCP), the predesignated RQI/RIC is the Federal On-Scene Coordinator for hazardous substance (HS) spills originating from Navy shore facilities or vessels. Under Navy policy, the QI/IC has full authority and responsibility to coordinate the response to all oil spills under the direction of either the predesignated EPA or USCG FOSC. The QI/IC reports directly to the RIC.

Listed below is an overview of the QI/IC or alternate authorities.

<b>Table FRP 2.21</b> <b>QI/IC and Alternate's Authority</b>	
Item	Limits
Contracting	<input type="checkbox"/> Unlimited <b>XX</b> Warrant Limit: List \$25,000 <input type="checkbox"/> Other:
Funding	Limit: <b>Through CNET</b>
Evacuation	<b>XX</b> Unlimited on Base <input type="checkbox"/> Limited off Terminal (Describe Limits):
Access to other DOD Components	<b>XX</b> Unlimited <input type="checkbox"/> Unlimited W/Concurrence of NOSC <input type="checkbox"/> Limited W/Concurrence of NOSC
Coordination with Federal OSC	<input type="checkbox"/> Unlimited <b>XX</b> Unlimited W/Concurrence of NOSC <input type="checkbox"/> Limited W/Concurrence of NOSC
Coordination with state regulators	<b>XX</b> Unlimited <input type="checkbox"/> Unlimited W/Concurrence of NOSC <input type="checkbox"/> Limited W/Concurrence of NOSC
Coordination with Media	<b>XX</b> Unlimited <input type="checkbox"/> Unlimited W/Concurrence of NOSC <input type="checkbox"/> Limited W/concurrence of NOSC
Manage all response efforts per Federal OSC direction	<input type="checkbox"/> Unlimited <b>XX</b> Unlimited W/Concurrence of NOSC <input type="checkbox"/> Limited W/Concurrence of NOSC (Describe Limits)

<b>Table FRP 2.22</b> <b>Qualified Individual's and Alternate's Duties</b>	
<b>Pre-Spill Duties</b>	
<ul style="list-style-type: none"> <li>Develop a facility response plan to meet current regulations and to provide adequate personnel and other resources necessary to respond to the average most probable facility spill.</li> </ul>	
<ul style="list-style-type: none"> <li>Conduct sufficient number of drills to ensure that the response plan, personnel, and equipment are adequate and work as expected.</li> </ul>	
<ul style="list-style-type: none"> <li>Review response plan at least annually to ensure that it remains up to date.</li> </ul>	
<ul style="list-style-type: none"> <li>Ensure facility response personnel maintain mandatory training levels (OSHA, etc.).</li> </ul>	
<b>Spill Response Duties</b>	
<ul style="list-style-type: none"> <li>Obtain initial incident briefing from the Immediate Response Team (IRT). Characterize spill to obtain spill notification data.</li> </ul>	
<ul style="list-style-type: none"> <li>Activate system to notify spill response management team</li> </ul>	
<ul style="list-style-type: none"> <li>Characterize the spill as to source, amount, and other items needed to make required notifications.</li> </ul>	
<ul style="list-style-type: none"> <li>Contact RIC and provide spill briefing. Request additional resources as needed. Ensure appropriate notifications are made.</li> </ul>	
<ul style="list-style-type: none"> <li>Make incompatibility/interaction assessment and notify proper response personnel.</li> </ul>	
<ul style="list-style-type: none"> <li>Assess the situation for possible direct and indirect health and safety hazards, environmental risks, and coordinate prompt rescue, response, removal, containment, diversion actions, and evacuation actions as outlined in the response plan.</li> </ul>	
<ul style="list-style-type: none"> <li>Ensure that personnel safety is accorded highest priority; assess the interaction of the spill substance with water and/or other substances stored at the facility and notify the response personnel at the scene of the safety assessment.</li> </ul>	
<ul style="list-style-type: none"> <li>Develop strategic objectives and response priorities.</li> </ul>	
<ul style="list-style-type: none"> <li>Ensure that spill event and response efforts, costs, orders, contracted personnel and equipment are properly documented.</li> </ul>	
<ul style="list-style-type: none"> <li>Approve Incident Action Plans, site-specific Health and Safety Plans, and other plans as needed.</li> </ul>	
<ul style="list-style-type: none"> <li>Serve as primary contact with FOSC and state regulators.</li> </ul>	
<ul style="list-style-type: none"> <li>Attend unified command meetings with the FOSC and federal and state regulators.</li> </ul>	
<ul style="list-style-type: none"> <li>Manage overall response operations to ensure they are consistent with Navy policy, federal, state, and local regulations, and the needs of impacted areas.</li> </ul>	
<ul style="list-style-type: none"> <li>Review and approve resource allocation changes.</li> </ul>	
<ul style="list-style-type: none"> <li>Monitor response effort and adjust as necessary.</li> </ul>	
<ul style="list-style-type: none"> <li>Serve as primary spokesperson with news media.</li> </ul>	
<ul style="list-style-type: none"> <li>Review and approve news releases</li> </ul>	
<ul style="list-style-type: none"> <li>Make requests through the RIC for outside resources.</li> </ul>	
<ul style="list-style-type: none"> <li>Approve Demobilization Plan.</li> </ul>	
<b>After-Spill Duties</b>	
<ul style="list-style-type: none"> <li>Develop spill report to determine strengths and weaknesses of plan, response effort, etc.</li> </ul>	
<ul style="list-style-type: none"> <li>Amend plan based on lessons learned</li> </ul>	
<ul style="list-style-type: none"> <li>Review plan for deficiencies.</li> </ul>	

## TAB 3 – HAZARD EVALUATION

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## TAB 3 — HAZARD EVALUATION

### 3.0 HAZARD EVALUATION

#### 3.1 Hazard Identification

This section identifies the potential sources of spills at NAS Corpus Christi and describes the facility's oil operations and associated oil storage and throughput volumes.

Table FRP 3.1 Aboveground Oil Storage Tanks						
Tank No	Oil Stored	Maximum Capacity (gal)	Average Stored (gal)	Tank Type	Year	Failure Cause & Date
1833	JP-5	1,200	N/A	AST, S	Unknown	None recorded
310-1	JP-5	8,000	N/A	Tanker	1994	None recorded
310-2	JP-5	8,000	N/A	Tanker	1994	None recorded
310-3	JP-5	8,000	N/A	Tanker	1994	None recorded
310-4	JP-5	8,000	N/A	Tanker	1994	None recorded
310-5	JP-5	8,000	N/A	Tanker	1994	None recorded
310-6	JP-5	8,000	N/A	Tanker	1994	None recorded
501292	JP-5	5,000	N/A	Tanker	1994	None recorded
666	JP-5	8,000	N/A	Tanker	1994	None recorded
Unknown	MOGAS/JP-5	3,000	N/A	Tanker	1994	None recorded
13-1 *	Fuel Oil #2 / JP-5	400,000	N/A	AST, S	Unknown	None recorded
13-2 *	Fuel Oil #2 / JP-5	400,000	N/A	AST, S	Unknown	None recorded
1720-1	JP-5	250,000	N/A	AST, S	Unknown	None recorded
1720-2	JP-5	250,000	N/A	AST, S	Unknown	None recorded
W-5	Waste Oil	1,000	N/A	AST, S	Unknown	None recorded
1743-1	MOGAS	250	N/A	AST, S, CV	1992	None recorded
1743-2	JP-5	250	N/A	AST, S, CV	1992	None recorded
1757-1	MOGAS	250	N/A	AST, S, CV	1992	None recorded
W-1-1	JP-5	500	N/A	AST, S, CV	1992	None recorded
H-100-4	JP-5	2,000	N/A	AST, S, CV	1992	None recorded
254-N-1	JP-5	250	N/A	AST, S, CV	1992	None recorded
1238-1	JP-5	250	N/A	AST, S, CV	1992	None recorded
1729-1	JP-5	250	N/A	AST, S, CV	1992	None recorded
1804-1	JP-5	1,000	N/A	AST, S, CV	1992	None recorded

Table FRP 3.1 Aboveground Oil Storage Tanks						
Tank No	Oil Stored	Maximum Capacity (gal)	Average Stored (gal)	Tank Type	Year	Failure Cause & Date
1828-1	VAR SOL	10,000	N/A	AST, S	1985	None recorded
1828-2	TCE	6,000	N/A	AST, S	1985	None recorded
1237	JP-5	500	N/A	AST, S	1980	None recorded
1120-1	JP-5	500	N/A	AST, S	Unknown	None recorded
1120-2	JP-5	500	N/A	AST, S	1972	None recorded
Total Maximum Aboveground Oil Storage Capacity (gal)						1,388,700

Key To Tank Type Column	
AST	— Complete Aboveground Storage Tank
CV	— Concrete Vault
S	— Steel
<b>Note:</b> "Recovered/waste JP-5 or other fuels can be mixed with the contains of Tanks 13-1 and/or 13-2, which are used for temporary storage of recovered product, and burned in the base heating plant. However, due to the fact that NAS Corpus Christi utilizes natural gas as the primary fuel source for heating, Tanks 13-1 and 13-2 are usually empty and disposal burns are conducted only when sufficient fuel quantities are available."	

Table FRP 3.2 Underground Oil Storage Tanks						
Tank No	Oil Stored	Maximum Capacity (gal)	Average Stored (gal)	Tank Type	Year	Failure Cause & Date
62	JP-5	1,000	N/A	UST, FRP	1982	None recorded
111	JP-5	850	N/A	UST, FRP	1982	None recorded
1282	JP-5	15,000	6,000	UST, FRP	1980	None recorded
89-1	JP-5	4,000	N/A	UST, FRP	1986	None recorded
1263-4	MOGAS	10,000	N/A	UST, FRP	1986	None recorded
1263-5	MOGAS	10,000	N/A	UST, FRP	1986	None recorded
1263-6	MOGAS	10,000	N/A	UST, FRP	1986	None recorded
10-1	JP-5	4,000	N/A	UST, FRP	1988	None recorded
H-100-1	JP-5	20,000	N/A	UST, FRP	1980	None recorded
H-100-2	JP-5	20,000	N/A	UST, FRP	1980	None recorded
216A-1	VAR SOL	13,000	N/A	UST, S	1943	None recorded
216A-2	JP-4	13,000	N/A	UST, S	1943	None recorded
216A-6	JP-4	3,000	N/A	UST, S	1963	None recorded
216A-7	JP-4	3,000	N/A	UST, S	1963	None recorded
1241	JP-5	500	N/A	UST, S	1965	None recorded
167-1	MOGAS	10,000	N/A	UST, V	1993	None recorded
167-2	JP-5	10,000	N/A	UST, V	1993	None recorded
Total Maximum Underground Oil Storage Capacity (gal)						147,350

Key Tank Type Column	
FRP	— Fiberglass Reinforced Plastic
V	— Vaulted
S	— Steel

Table FRP 3.3 Surface Impoundments (SI)						
SI No.	Oil Stored	Maximum Capacity (gal)	Average Stored (gal)	Surface Area (ft <sup>2</sup> )	Year	Failure Cause & Date
None						
Total SI Maximum Oil Storage Capacity (gal)						None

**Table FRP 3.4  
Secondary Containment**

<b>Tank No or Transfer Facility</b>	<b>Secondary Containment ID</b>	<b>Capacity (gal)</b>	<b>Not Contained (gal)</b>	<b>Containment Type</b>
1833	Yes	1,200	0	Concrete dike walls and floor
Flight Line Tankers	Yes	5,000	59,000	Concrete sump area
13-1	Yes	393,568	6,432	5-foot high concrete wall and floor area
13-2	Yes	393,568	6,432	5-foot high concrete wall and floor area
1720-1	Yes**	154,252	345,748 for 1720-1 and 1720-2	Earthen dikes (1720-1 and 1720-2 contained as one system)
1720-2	Yes**	154,252	See above	Earthen dikes (1720-1 and 1720-2 contained as one system)
1743-1	Yes	250	0	Concrete vaulted tank
1743-2	Yes	250	0	Concrete vaulted tank
1757-1	Yes	250	0	Concrete vaulted tank
W-1-1	Yes	500	0	Concrete vaulted tank
H-100-4	Yes	2,000	0	Concrete vaulted tank
254-N-1	Yes	250	0	Concrete vaulted tank
1238-1	Yes	250	0	Concrete vaulted tank
1729-1	Yes	250	0	Concrete vaulted tank
1804-1	Yes	1,000	0	Concrete vaulted tank
1828-1	Yes	24,078	0	Concrete dike walls and floor
1237	Yes	454	46	Concrete dike walls and floor
1120-1	Yes**	1,317	0	1120-1 and 1120-2 contained in one system
1120-2	Yes**	1,317	0	1120-1 and 1120-2 contained in one system
<b>Total Secondary Containment Capacity (gal) [Total Volume of Oil Not Contained (gal)]</b>				<b>964,042 [424,658]</b>

**Comments on Secondary Containment Capacity**

**Note:** Identification of Secondary Containment capacity was based on the SPCC plan for NAS Corpus Christi and field survey. Where Secondary Containment was stated as being adequate, the total volume was utilized. Where secondary containment was not in the SPCC it was calculated from field measurements.

**\*\*** Denotes where two ASTs are contained in one secondary containment system. The overall volume of total system is noted, but only included once in volume calculations. The total volume of oil contained is the sum of each aboveground tank volume contained in secondary containment.

**Table FRP 3.5  
Oil Transfer Facilities**

Loading/Unloading Operation	Ways a Discharge Could Occur	Volume Typically Involved (gal)
Tank Truck	<b>Loading</b>	Leaks from piping, fittings, valves, hoses, transfer connections, and other equipment, to include the tank truck
		Operator Errors and Equipment Malfunctions That Causes Overfills During Loading Operations
		Structural and Equipment Component Failures Caused by Collision with Mobile Equipment; Catastrophic Ruptures and Failures of Valves, Hoses, Piping, and Tank Truck Seams and Rivets, Loading Arms, Etc.
		Accidents and Operational Spills, to Include Fire and Explosions, as a Result of Not Following Established Transfer Procedures
Vessel / Rail Car	<b>Unloading</b>	Similar items as above
	<b>Loading / Unloading</b>	NAS Corpus Christi does transfer to/from vessels or Railcars
Variable, but should not exceed several gallons		
Should not exceed 300-400 gal since the maximum transfer rate is 300-400 gal/min; at best, the operator can immediately stop the pump at the pump station, but in any case, in less than 1 minute		
<ul style="list-style-type: none"> <li>Up to 1,100 gal (drainage volume in pipeline from pump station to load stand is about 600 gal and dynamic part of discharge could be up to 400 gal)</li> <li>Up to 3,000 gal if a failure results in a discharge from a tank truck compartment for multi-compartment tank trucks</li> <li>Up to 9,000 gal if a failure results in a discharge from a single compartment tank truck</li> </ul>		
<ul style="list-style-type: none"> <li>Up to several gallons, e.g., during improperly conducted quick-connect or -disconnect coupling operations or there is a leak because of an improperly aligned load rack line</li> <li>Up to 10,000 gal in a fire with a tank truck at the load stand</li> </ul>		

Table FRP 3.6 Day-to-Day Operations		
Day-to-day Operation	Ways a Discharge Could Occur	Volume Typically Involved (gal)
Pipe Repair	<ul style="list-style-type: none"> <li>Equipment failures due to faulty installation or repairs, e.g., installing bolts improperly, installing components with incorrect specifications, and installing improperly selected gaskets</li> <li>Failure to completely or adequately isolate and evacuate oil in section or component before repairs</li> </ul>	Variable, from less than a gallon to 8,000 gallons (drainage volume of the 16-in diameter pipeline on the facility)
Valve Repair	<ul style="list-style-type: none"> <li>Leaks from valve stems due to improperly adjusted valve packings and failures of valve body parts due to improper joining to piping</li> <li>Improper adjustment of pressure relief valves</li> <li>Failure to completely or adequately isolate and evacuate oil before repairing valve</li> </ul>	Variable, from less than a gallon to 8,000 gallons (drainage volume of the 16-in diameter pipeline on the facility)
Tank-to-Tank Transfers	Overfills due to valve misalignments and/or tank gauging errors	Up to 5,000 gallons (one 500 gal/min pump used for intra-terminal transfers and 10 minutes to detect spill and shutoff pump)
Draining Tank Bottom Water	<ul style="list-style-type: none"> <li>Failure of equipment components</li> <li>Inadequate monitoring of bottom water draining operation</li> </ul>	Variable
Draining Secondary Containment	<ul style="list-style-type: none"> <li>Inadequate inspection of impounded dike water before draining dikes</li> <li>Not fully closing dike drainage valve after opening</li> </ul>	Variable

Table FRP 3.7 Effects of Changes in Oil Throughput on Potential Spill Volumes		
Type Throughput	Normal Daily Throughput (gal)	How Spill Volume Could Be Affected by Change in Throughput
Transfers to Tank Trucks	30,000	An increase or decrease in throughput will not change the potential spill volume at the tank truck loading rack, unless the facility begins to service tank trucks with capacities greater than 9,000 gallons or adds additional fuel loading capabilities.
Transfers from Vessels / Railcars	Not applicable	Throughput changes will not change the potential spill volume since it depends on the pipeline drainage volume, the pumping rate, and the time for detecting and mitigating the spill.
<b>Note:</b> A significant increase in throughput can increase the volumes of spills from equipment failures involving equipment that would otherwise not fail under the previous throughputs if maintenance becomes insufficient.		

## 3.2 Vulnerability Analysis

### 3.2.1 Response Planning Distances and Sensitive Area Identification

Appendix C, Table Appendix C.5, contains the derivation of the response planning distances for this FRP. Table FRP 3.8 summarizes the FRP response planning distances. Table FRP 3.10 contains the prioritized list of environmentally and economically sensitive areas within the FRP response planning distances. The sensitive areas and the priorities are in accordance with the Area Contingency Plan (ACP). The priorities of these identified areas cannot be changed by the facility.

Table FRP 3.8 Facility Response Planning Distance			
Oil Type	I.D. of Navigable Water	Condition/Tide Cycle	Distance in Miles from Facility
Non-persistent	Corpus Christi Bay and Laguna Madre	Ebb/Flood	5 miles upstream in Oso Creek and 5 miles into Corpus Christi Bay

### 3.2.2 Identification of Vulnerable Areas and Risk of Impact

This section has been prepared to coordinate with ***South Texas Coastal Zone ACP***. The booming strategies and collection points are to be used as a first response decision-making tool. The priorities have been placed on the areas according to the Environmental Sensitivity Index (ESI) maps, field surveys, and shoreline prioritization standards that have been adopted by the U.S. scientific community. (See "Protection Priority Criteria" below, Table FRP 3.9 in this Tab.)

**Table FRP 3.9**  
**Protection Priority Criteria**

The following list is a protection priority criteria of which the ACP priority for protection decisions are based.

1* Polygons are red	2- Polygons are purple	3- Polygons are green	4- Polygons are blue
<p>(1*): extremely important (1): very important</p> <p>These are areas containing extremely important and sensitive habitat for threatened and endangered species. These areas typically possess documentation of occupancy by significant numbers of federally listed species and are currently used by those species. It is utmost important to realize that other areas, which do not have the 1* designation may, in fact, also contain high numbers of federally listed species, however documentation currently does not exist. This compilation effort is based on best available information, and new information, particularly concerning threatened and endangered species, may become available at any time. Furthermore, polygons not designated by a 1* may contain habitat similar in quality to those polygons for which habitat and documentation exist (1*).</p>	<p>(2): contain high-quality habitat</p> <p>These are areas containing very important habitat for threatened and endangered species (although documentation of occupancy is less than that in polygons designated 1*), high-priority waterbird colonies, significant avian use (usually greater than 10,000 shorebirds, wading birds, gulls, terns, and waterfowl), very high-quality marshes, algal flats, and other important resources.</p>	<p>(3): contain good quality habitat</p> <p>These are areas of high-quality habitat for avian species (up to 10,000 shorebirds, wading birds, gulls, terns, and waterfowl), candidate species, moderate-priority coastal waterbird colonies, high-quality marshes, oyster reefs, and dolphin use areas.</p>	<p>These are areas of good quality habitat for birds and fishery species; they contain good quality fringe marshes and typically have good avian use (up to 1,000 birds), candidate plant and animal species, migratory songbird fallout areas, and low-priority coastal waterbird colonies.</p>

**Note:** The ACP further states: "Fish and Wildlife agency concerns are intensified with certain areas located within the bay systems at specific times of the year due to larval recruitment, migratory bird use, and other seasonally related phenomena. Should an oil spill occur within the mapped areas, State and Federal resource agencies should be contacted immediately to assist in determining the direction the spill should be routed and in other aspects of the cleanup effort."

### 3.2.3 Resources at Risk

Table FRP 3.10 List of ACP Sensitive Areas and Areas of Economic Importance			
Protection Sites			
Nueces County, Texas Map (1980) ** See Note Below			
Priority Rating	Reference Nueces Map Polygon	Location Description	Ecological Significance
1*	A	Gulf side of Mustang Island	Greater than 100 piping plover, peregrine falcon (threatened and endangered species), snowy plover (candidate species), polygon partially encompasses Mustang Island State Park.
1*	C	Shoreline in Galleon Bay on Padre Island	Greater than 100 piping plover, peregrine falcon, snowy plover, reddish egret (candidate species), 10,000+ shore birds, wading birds, gulls, terns, and waterfowl, extensive habitat modifications, algal flats, low-priority rookery, some strands of smooth cordgrass, moderate strands of emergent marsh, seagrasses, some oysters
1*	D	North of Galleon Bay on Padre Island, NE of JFK Causeway	Greater than 50 piping plover, snowy plover, polygon partially encompasses Mustang Island State Park, oyster clumps and reefs, algal flats, seagrasses, sparse to moderate strands of smooth cordgrass, and other emergent marsh species along shorelines.
1*	E	Corpus Christi Bay side of Mustang Island	Greater than 50 piping plover, snowy plover, algal flats
1	G	Western side of Oso Creek	Snowy plover
1	I	N & S of JFK Causeway	Peregrine falcon, high-priority rookery, algal flats, 20,000 water fowl, seagrasses along shorelines
1	J	N & S of JFK Causeway	100+ reddish egret, low-priority rookery, 10,000+ shore birds, wading birds, gulls, and terns, 20,000+ waterfowl, algal flats, extensive seagrasses along shorelines, smooth cordgrass marsh along shorelines
1	L	Southern side of Ward Island	Piping plover, peregrine falcon, snowy plover, reddish egret, 10,000+ shore birds, wading birds, gulls, terns, and waterfowl, algal flats, smooth cordgrass marsh, other emergent marsh species, moderate seagrasses throughout polygon
1	M	West side of Mustang Island	Piping plover, peregrine falcon, snowy plover, 100+ reddish egret, 10,000+ shore birds, wading birds, gulls, terns, and waterfowl, some clumps of oysters, algal flats, seagrasses, dense smooth cordgrass along shorelines, other emergent marsh species
1	O	Near Ward Island	Piping plover, snowy plover, 100 reddish egret, 20,000 waterfowl, 10,000 shore birds, wading birds, gulls, and terns, seagrasses, emergent marsh along shorelines.

Table FRP 3.10 List of ACP Sensitive Areas and Areas of Economic Importance			
Protection Sites			
Nueces County, Texas Map (1980) ** See Note Below			
Priority Rating	Reference Nueces Map Polygon	Location Description	Ecological Significance
1	Q	West side of Mustang Island, Mustang Island State park	Piping plover, peregrine falcon, snowy plover, 100 reddish egret, Mustang Island State Park, 20,000 waterfowl, 10,000+ shore birds, wading birds, gulls, and terns, algal flats, some oyster clumps at the north end of the polygon, dense seagrasses in the southern end of the polygon, bands of seagrasses along shorelines, smooth cordgrass marsh along shorelines, other emergent marsh species.
1	R	Laguna Madre along JFK Causeway	Peregrine falcon, 100+ reddish egret, 10,000+ waterfowl, 10,000+ shore birds, gulls, and terns, dense seagrasses throughout polygon
1	S	Inland side of Padre Island south of Galleon Bay	Piping plover, snowy plover, algal flats
1	U	North of NAS Corpus Christi in Corpus Christi Bay	Oyster reefs
2	V	Oso Creek along NW boundary of NAS Corpus Christi	Moderate seagrasses, some emergent marsh along shorelines, algal flats

**\*\* Note:** All references are from the Nueces County Map (1980). The Nueces County Map (1969) as annotated by the Texas Water Commission is provided for clarification (see FRP, Part J).

### 3.2.4 Wildlife Oil Vulnerabilities

The following tables, Tables 3.11 to 3.15, depict wildlife resources within the FRP planning distance. The tables show, by season, wildlife vulnerabilities to oil.

**Note:** Detailed wildlife information for the NAS Corpus Christi area was not initially available. When detailed information is obtained, it will be incorporated and promulgated in a future revision.

Table FRP 3.11 Birds					
Species	Season				General
	SP	S	F	W	
Seabirds					
Vulnerability to Oil: Ingestion of contaminated food and oiling of eggs and young are the primary oil spill impacts.					
Note: A specific list of bird species present was not available at initial printing other than listed in Table FRP 3.10. A more detailed Breakout will be promulgated in a future revision.					
Shorebirds					
Vulnerability to Oil: Large, complex group of birds. Feed along tidal flats and beaches. Feed mostly at low tide, either along the barrier beaches or on the tidal flats fronting marshes in sheltered areas. Moderately sensitive to direct oil spill impacts. Generally shorebirds avoid oiled areas, as long as other clean areas are available.					
Piping Plover ( <i>Charadrius melodus</i> )					Threatened. Possibly occurs in winter along shorelines, but more typical of barrier island systems.
Snowy Plover ( <i>Charadrius alexandrinus</i> )	N	N			Threatened. Possibly occurs in winter along shorelines, but more typical of barrier island systems.
Diving Birds					
Vulnerability to Oil: Highly susceptible to oil spills because they dive from the air for food.					
Brown Pelican ( <i>Pelecanus occidentalis</i> )	N	N	N		No breeding habitats exist on base, but they are within the zone of spill impact from NAS Corpus Christi, in the Corpus Christi Bay vicinity.
Wading Birds					
Vulnerability to Oil: These birds have long legs and feed on fish by wading in shallow water. They normally are not seen in large numbers except in localized areas for roosting and/or nesting. Low sensitivity to oil. Appear to avoid oil and are seldom directly contaminated. Loss of food or contaminated food can lead to serious impacts for wading birds.					
Reddish Egret ( <i>Dichromanassa rufescens</i> )	N			N	Restricted to shorelines, sandbars, and shallow salt ponds.

Table FRP 3.11 Birds					
Species	Season				General
	SP	S	F	W	
Waterfowl					
Vulnerability to Oil: Waterfowl overwinter along in the vicinity of Corpus Christi Bay and NAS Corpus Christi. These birds dive for food and spend much of the time on the open-water surface. Highly susceptible to oil spills, even small slicks.					
Raptors					
Vulnerability to Oil: Ingestion of contaminated food and oiling of eggs and young are the primary oil spill impacts.					
Peregrine Falcon ( <i>Falco peregrinus</i> )					Endangered. Probable migration and in winter, primarily along shorelines where shorebirds constitute their primary prey.
Legend: N = Nesting Shading = Seasons present					

Table FRP 3.12 Mammals and Reptiles					
Species	Season				General
	SP	S	F	W	
Mammals					
Vulnerability to Oil: Oil will irritate mucous membranes upon prolonged exposure. They will attempt to avoid spill areas.					
Bottlenose Dolphin ( <i>Tursiops truncatus</i> )					
Reptiles					
Vulnerability to Oil: Distributed throughout freshwater swamps and brackish marshes throughout the worst-case discharge planning area. Oil impacts will range from none to severe depending on the type and amount spilled.					
Atlantic Loggerhead Turtle ( <i>Caretta caretta</i> )	N	N	N		Endangered
Kemp's (Atlantic) Ridley Sea Turtle ( <i>Lepidochelys kempii</i> )	N	N	N		Endangered
Loggerhead Sea Turtle ( <i>Caretta caretta</i> )	N	N	N		Threatened
Legend: N = Nesting Shading = Seasons present SSC = Species of Special Concern					

Table FRP 3.13 Finish					
Species	Season				General
	SP	S	F	W	
Note: A detailed listing of finfish for the region will be promulgated in a future revision					
Vulnerability to Oil: Marshes and creeks are common concentration areas for environmentally sensitive juvenile fish. Spilled oil or chemicals tend to persist in these areas of low tidal flushing. Protection of these spawning and developmental habitats is essential as they are top priority protection sites.					
Legend: S = Spawning Shading = Seasons present					

Table FRP 3.14 Shellfish and Crustaceans					
Species	Season				General
	SP	S	F	W	
Shellfish					
Vulnerability to Oil: Extremely sensitive. Sessile and cannot escape oil. They are filter feeders and are susceptible to biomagnification. If the pollutant floats, intertidal bivalves would be covered by slick due to tidal action. Water-soluble fractions of oil would affect all bivalves.					
American Oyster ( <i>Crassostree virginica</i> )	S	S			
Crustaceans					
Vulnerability to Oil: Crustaceans are commercially important to the area economy. Environmental damage to brackish and salt marshes, intertidal zones, and subtidal habitats within the region and close to NAS Corpus Christi caused by oil and chemical spills could result in severe ecological and economic impacts on these species. Unaffected by surface slicks but would be impacted by the water-soluble fraction. Found in all subtidal areas, especially in estuarine areas behind the barrier islands. Marshes are important nursery areas and have high concentrations of juvenile crabs and shrimp during much of the year.					
Blue Crab ( <i>Calinectes sapidus</i> )	S	S	S		
Stone Crab					
Rock Shrimp					
Pink Shrimp					
Spiny Lobster					
Squid					
Brown Shrimp ( <i>Penaeus aztecus</i> )			S	S	
White Shrimp ( <i>Penaeus setiferus</i> )	S	S			
<b>Legend:</b> S = Spawning Shading = Seasons present					

**Table FRP 3.15  
Endangered/Threatened Species.**

Species	Season				Status	General
	SP	S	F	W		
Birds						
Vulnerability to Oil: Birds are vulnerable to oil when they dive for food, or gather on the surface of the water and along shorelines.						
Piping Plover ( <i>Charadrius melodus</i> )						Threatened. Possibly occurs in winter along shorelines, but more typical of barrier island systems.
Peregrine Falcon ( <i>Falco peregrinus</i> )						Endangered. Probable migration and in winter, primarily along shorelines where shorebirds constitute their primary prey.
Snowy Plover ( <i>Charadrius alexandrinus</i> )	N	N				Threatened. Possibly occurs in winter along shorelines, but more typical of barrier island systems.
Mammals						
Vulnerability to Oil: Oil will irritate of mucous membranes upon prolonged exposure. They will attempt to avoid spill areas.						
Reptiles and Amphibians						
Vulnerability to Oil: Highly sensitive when turtles gather on beaches for nesting. Egg contamination is likely and juveniles are at a high risk. Distributed throughout response planning area. Mucous membrane irritation due to long exposure to oil in water column.						
Kemp's (Atlantic) Ridley Sea Turtle ( <i>Lepidochelys kempi</i> )	N	N	N		E; F&S	
Atlantic Loggerhead Turtle ( <i>Caretta caretta</i> )	N	N	N			Endangered.
Hawksbill Turtle ( <i>Eretmochelys imbricata</i> )	N	N	N		E; F&S	
Loggerhead Sea Turtle ( <i>Caretta caretta</i> )	N	N	N		T; F&S	
<b>Legend:</b>						
Season			Status			
N	=	Nesting	E = Endangered			
S	=	Spawning	T = Threatened			
Shading	=	Season present	F = Federally Listed			
			S = State Listed			

### **3.2.5 Other Sensitive Areas of Economic Importance**

The proximity of the listed schools and water intakes make them of economic importance during an incident. They should be notified during an incident if at risk:

- Flour Bluff School District  
2505 Waldron Road  
(512) 937-2681

The Flour Bluff School District encompasses an Elementary School, Primary School, Grade School, Intermediate School, a Junior-Senior High School and associated school office buildings. All can be notified about an incident at the listed number.

- The closest water intake to NAS Corpus Christi is 6 miles south in the Laguna Madre near the Barney M. Davis cooling reservoir (see Tab 18, ESI figure 178).

### **3.2.6 Other Vulnerable Areas**

#### **3.2.6.1 Transportation Routes**

Transportation routes (air, land and water) were examined for the entire NAS Corpus Christi area. Based on this survey, it was determined that the proximity of the listed transportation routes make them vulnerable to impact depending on the location of an incident. These areas are:

- Numerous runways on NAS Corpus Christi could be impacted depending on the location and extent of an incident. A spill would not have to cross a runway to affect its use (see NAS Corpus Christi overall base diagram, ERAP, Tab J or FRP, Tab 18).
- Numerous streets on NAS Corpus Christi could be impacted depending on the extent of an incident, i.e., a spill could cross a roadway (see NAS Corpus Christi overall base diagram, ERAP, Tab J or FRP, Tab 18).
- The waterways surrounding NAS Corpus Christi could be impacted depending on the extent of an incident. If a spill was large enough, or if surface run-off was maximized during the rainy season, it is possible that Oso Bay, Corpus Christi Bay or Laguna Madre could be impacted during a spill (see NAS Corpus Christi overall base diagram, ERAP, Tab J or FRP, Tab 18).

#### **3.2.6.2 Utilities**

Sewer treatment and electrical utilities were examined on NAS Corpus Christi. They are somewhat vulnerable to impact, depending on the location of an incident. The sewer treatment facility is the most vulnerable, as an evacuation resulting from a spill may require a facility shutdown. Additionally, electrical utility impacts are extremely location dependent, due to the large number of transformers (i.e., 353+) and base wide location of storage tanks. A more detailed site specific analysis of each transformer is necessary to determine which units are at the greatest spill impact risk.

#### **3.2.6.3 Other Applicable Areas**

Based on an ACP review and a NAS Corpus Christi field survey, it was determined that as of July 1996, there are no additional vulnerable areas which require detailed analysis and inclusion in this section.

### 3.3 Analysis of the Potential for a Spill

Analysis of the Potential for Spills at Identified Sources												
Table FRP 3.16 Tank #/Transfer Facility/Operation Tanks 13-1, 13-2, 1720-1, 1720-2, 1828-1 and 1828-2												
Factor	Low ----- High										Score	
	1	2	3	4	5	6	7	8	9	10		
Probability of Spills from Equipment Failure, Malfunction, Leaks, Etc., Due to Age					x						5	
Throughput activity								x			8	
History of spills	0										0	
Probability that corrective actions for spills will not eliminate/minimize same spills in future			x								3	
Maximum potential spill volume: 1,323,600 gal										x	10	
Accessibility of pathways to navigable water/sensitive areas										x	10	
Pathways: Surface and tidal drainage ditches, Oso Bay, Corpus Christi Bay, Laguna Madre, and groundwater												
Vulnerability to natural disasters								x			8	
Types: Storms, hurricanes, lightning, and flooding												
Probability of spills due to maintenance deficiencies			x								3	
Probability of spills due to operator training, job knowledge, and shortfalls in standard operating procedures (SOPs).			x								3	
Noncompliance with SPCC plan prevention requirements								x			8	
Total Score											58	

Analysis of the Potential for Spills at Identified Sources												
Table FRP 3.17 Tank #/TRANSFER Facility/Operation Receiving and Dispensing Equipment, Tank Truck Parking Area on Ready Line and Tanks 1720-1 and 1720-2												
Factor	Low ----- High										Score	
	1	2	3	4	5	6	7	8	9	10		
Probability of spills from equipment failure, malfunction, leaks, etc., due to age					X						5	
Throughput activity			x								3	
History of spills	0										0	
Probability that corrective actions for spills will not eliminate/minimize same spills in future	0										0	
Maximum potential spill volume: 65,000 gal										x	10	
Accessibility of pathways to navigable water/sensitive areas										x	10	
Pathways: Surface and tidal drainage ditches, Oso Bay, Corpus Christi Bay, Laguna Madre, and groundwater												
Vulnerability to natural disasters								x			8	
Types: Storms, hurricanes, lightning, and flooding												
Probability of spills due to maintenance deficiencies	x										1	
Probability of spills due to operator training, job knowledge, and SOP shortfalls			x								3	
Noncompliance with SPCC plan prevention requirements					x						5	
Total Score											45	

**Analysis of the Potential for Spills at Identified Sources**

**Table FRP 3.18  
Tank #/Transfer Facility/Operation  
NAS Corpus Christi NTR Facility Pipelines and Appurtenances**

Factor	Low ----- High										Score
	1	2	3	4	5	6	7	8	9	10	
Probability of spills from equipment failure, malfunction, leaks, etc., due to age	x										1
Throughput activity				x							4
History of spills	0										0
Probability that corrective actions for spills will not eliminate/minimize same spills in future	0										0
Maximum potential spill volume: 10,000 gal			x								3
Accessibility of pathways to navigable water/sensitive areas  Pathways: Surface and tidal drainage ditches, Oso Bay, Corpus Christi Bay, Laguna Madre, and groundwater										x	10
Vulnerability to natural disasters  Types: Storms, hurricanes, lightning and flooding								x			8
Probability of spills due to maintenance deficiencies	x										1
Probability of spills due to operator training, job knowledge, and SOP shortfalls			x								3
Noncompliance with SPCC plan prevention requirements	x										1
<b>Total Score</b>											<b>31</b>

Analysis of the Potential for Spills at Identified Sources											
Table FRP 3.19											
Tank #/Transfer Facility/operation: Aboveground Tanks: All Others											
Factor	Low ----- High										Score
	1	2	3	4	5	6	7	8	9	10	
Probability of spills from equipment failure, malfunction, leaks, etc., due to age	x										1
Throughput activity	x										1
History of spills	0										0
Probability that corrective actions for spills will not eliminate/minimize same spills in future	0										0
Maximum potential spill volume: 250 - 2,000 gal	x										1
Accessibility of pathways to navigable water/sensitive areas										x	10
Pathways: Surface and tidal drainage ditches, Oso Bay, Corpus Christi Bay, Laguna Madre, and groundwater											
Vulnerability to natural disasters								x			8
Types: Storms, hurricanes, lightning and flooding											
Probability of spills due to maintenance deficiencies	x										1
Probability of spills due to operator training, job knowledge, and SOP shortfalls			x								3
Noncompliance with SPCC plan prevention requirements	x										1
Total Score											26

### 3.4 Facility Spill History

Table FRP 3.20 Facility Spill History				
Cause/Actions				
Date: 23 FEB 1988	Location between Hangars 56 & 57	Product: JP-5	Spill Volume (gal): 100 gallons	Spill Volume into Navigable Water (gal): None
Cause: Weld parted on AVANTRA Fuel Truck while making sharp turn between Hangars 56 and 57. (No AST involved in incident.)				
Effectiveness of Secondary Containment: No secondary containment				
Detection: Visual by Tank Truck Driver				
Effectiveness of Monitoring Equipment: No monitoring equipment				
Recovery & Cleanup Actions: Fifteen bags of clay absorbents, two oil spill boom sections, and three overpack drums used.				
Corrections to Prevent Recurrence: Unknown				
Enforcement Action: Unknown				
Date: 29 MAR 1988	Location: T-34 Aircraft on the C-flight line	Product: JP-5	Spill Volume (gal): 50 gallons	Spill Volume into Navigable Water (gal): None
Cause: Faulty relief valve leaked approximately 50 gallons of JP-5 on the flight line. (No AST involved in incident.)				
Effectiveness of Secondary Containment: No secondary containment				
Detection: Visual by Dnyalelectron Corp. personnel				
Effectiveness of Monitoring Equipment: No monitoring equipment				
Recovery & Cleanup Actions: HAZMAT vehicle personnel placed four absorbent boomers and four bags of absorbent material around spill. Dnyalelectron Corp. supplied approximately 8 bags of absorbent material. Five overpack drums were used.				
Corrections to Prevent Recurrence: Unknown				
Enforcement Action: Unknown				
Date: 21 NOV 1988	Location: CCAD, Heat Treatment Shop	Product: Roughing Oil	Spill Volume (gal): 5 gallons	Spill Volume into Navigable Water (gal): None
Cause: Roughing oil spilled from Furnace 26 Motor; cause unknown. (No AST involved in incident.)				
Effectiveness of Secondary Containment: No secondary containment				
Detection: Visual by CCAD personnel				
Effectiveness of Monitoring Equipment: No monitoring equipment				
Recovery & Cleanup Actions: Spill was containerized with absorbents.				
Corrections to Prevent Recurrence: Removed and inspected drain valve, joints and refilled reservoir; monitored for additional leaks.				
Enforcement Action: Unknown				

Table FRP 3.20 Facility Spill History				
Cause/Actions				
Date: 11 DEC 1992	Location: NEX Service Station	Product: Gasoline	Spill Volume (gal): 15-20 gallons	Spill Volume into Navigable Water (gal): None
Cause: Driver filling NEX Service Station tanks not attentive to tanks, caps on tanks not properly attached, no overflow alarm and difference in NEX and Driver tank soundings. (No AST involved in incident. Instead overfill from 10,000 gals UST at NEX Service Station.)				
Effectiveness of Secondary Containment: No secondary containment				
Detection: Visual by NEX Station personnel				
Effectiveness of Monitoring Equipment: No monitoring equipment				
Recovery & Cleanup Actions: Spill allowed to evaporate, contaminated soil was excavated, and oil spill pads were used to mop up free product. Additionally, monitoring wells were to be inspected for any groundwater contamination.				
Corrections to Prevent Recurrence: Unknown				
Enforcement Action: Unknown				
Date: 08 JUL 1993	Location: Rampside Hangar 58	Product: JP-5	Spill Volume (gal): 45 gallons	Spill Volume into Navigable Water (gal): None
Cause: In-flight switches were shutoff while fueling the T-45, causing the spill. (No AST involved in incident.)				
Effectiveness of Secondary Containment: No secondary containment				
Detection: Visual by fuel personnel				
Effectiveness of Monitoring Equipment: No monitoring equipment				
Recovery & Cleanup Actions: Approximately 10 bags of absorbent were used to recover the spill.				
Corrections to Prevent Recurrence: Unknown				
Enforcement Action: Unknown				
Date: 23 JUL 1993	Location: Corpus Christi Bay	Product: JP-5	Spill Volume (gal): 1,000 gallons	Spill Volume into Navigable Water (gal): 1,000
Cause: A TA-4 Aircraft crashed into Corpus Christi Bay approximately one mile offshore and 3/4 mile from Oso Bridge. Approximately 1,000 gallons of JP-5 was released into the water, causing a slick 50 yds x 200 yds. (No AST involved in incident.)				
Effectiveness of Secondary Containment: No secondary containment				
Detection: Visual by NAS Corpus Christi Tower personnel				
Effectiveness of Monitoring Equipment: No monitoring equipment				
Recovery & Cleanup Actions: Released JP-5 evaporated due to choppy conditions and approximately 25 cubic yards of mud were excavated and the area backfilled as per GLO letter of June 30, 1993.				
Corrections to Prevent Recurrence: Unknown				
Enforcement Action: Unknown				

Table FRP 3.20 Facility Spill History				
Cause/Actions				
Date: 23 SEPT 1993	Location: Corpus Christi Army Depot Fuel Farm Tank A-7	Product: JP-4	Spill Volume (gal): 20-25 gallons	Spill Volume into Navigable Water (gal): None
Cause: Overfill of storage tank A-7 at the Corpus Christi Army Depot 216 fuel farm. (Potential AST volume involved in incident not available.)				
Effectiveness of Secondary Containment: No secondary containment				
Detection: Visual by CCAD personnel				
Effectiveness of Monitoring Equipment: No monitoring equipment				
Recovery & Cleanup Actions: Absorbent was spread over a 5' x 8' area and removed. Additionally, approximately 2" of soil were excavated and then the area was to be examined for additional remediation, as required.				
Corrections to Prevent Recurrence: Unknown				
Enforcement Action: Unknown				
Date: 29 MAR 1994	Location: Jet Line Hangar 58	Product: JP-5	Spill Volume (gal): 10 gallons	Spill Volume into Navigable Water (gal): None
Cause: Not available (No AST involved in incident.)				
Effectiveness of Secondary Containment: No secondary containment				
Detection: Not available.				
Effectiveness of Monitoring Equipment: No monitoring equipment				
Recovery & Cleanup Actions: Oil Sorbent Roll Type 100 utilized to pick up fuel and place in 04 plastic bags.				
Corrections to Prevent Recurrence: Unknown				
Enforcement Action: Unknown				
Date: 31 MAR 1994	Location: Bldg 8	Product: Synthetic Transmission Oil	Spill Volume (gal): 15-20 gallons	Spill Volume into Navigable Water (gal): None
Cause: Mechanical failure; additional details not available. (No AST involved in incident, machinery related.)				
Effectiveness of Secondary Containment: No secondary containment				
Detection: Not available				
Effectiveness of Monitoring Equipment: No monitoring equipment				
Recovery & Cleanup Actions: Peat and clay absorbent utilized to pick up material from concrete surface near Building 8; one drum of debris generated.				
Corrections to Prevent Recurrence: Unknown				
Enforcement Action: Unknown				

Table FRP 3.20 Facility Spill History				
Cause/Actions				
<b>Date:</b> 05 OCT 1994	<b>Location:</b> Adjacent to Building 101	<b>Product:</b> Diesel Fuel	<b>Spill Volume (gal):</b> 35 gallons	<b>Spill Volume into Navigable Water (gal):</b> None
<b>Cause:</b> Navy tour bus fuel tank leaked onto the pavement; area 8' x 50' impacted. (No AST involved in incident.)				
<b>Effectiveness of Secondary Containment:</b> No secondary containment				
<b>Detection:</b> Visual by NAS Corpus Christi personnel				
<b>Effectiveness of Monitoring Equipment:</b> No monitoring equipment				
<b>Recovery &amp; Cleanup Actions:</b> Approximately 5 drums of fuel/absorbent mixture were recovered from the asphalt parking lot.				
<b>Corrections to Prevent Recurrence:</b> Fuel tank of Navy tour bus was emptied and new tank was installed.				
<b>Enforcement Action:</b> Unknown				
<b>Date:</b> 01 DEC 1994	<b>Location:</b> Adjacent to Taxiway S and near Fuel Farm	<b>Product:</b> JP-5	<b>Spill Volume (gal):</b> 130 gallons	<b>Spill Volume into Navigable Water (gal):</b> None
<b>Cause:</b> Operator error caused a fuel sump tank on T-34 aircraft to rupture during defueling operations. Spill covered approximately 100' x 100' concrete area. (No AST involved in incident.)				
<b>Effectiveness of Secondary Containment:</b> No secondary containment				
<b>Detection:</b> Visual by NAS Corpus Christi personnel				
<b>Effectiveness of Monitoring Equipment:</b> No monitoring equipment				
<b>Recovery &amp; Cleanup Actions:</b> Approximately 50 gallons of fuel were captured in a container placed under the aircraft. The remaining fuel was absorbed with Speedy Dry and placed in four drums for disposal.				
<b>Corrections to Prevent Recurrence:</b> Unknown				
<b>Enforcement Action:</b> Unknown				

## **TAB 4 — SCENARIOS**

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## TAB 4 — SCENARIOS

### 4.0 SCENARIOS

#### 4.1 General

EPA-regulated Non-Transportation-Related (NTR) facilities are required to develop oil spill scenarios based on the facility's tiered discharge planning volumes. This FRP describes discharge scenarios to demonstrate plan implementation for the small to the worst-case discharge planning volumes.

This FRP describes discharge scenarios to demonstrate plan implementation for the larger of the small to medium discharge planning volume. This plan has also defined the facility's worst-case discharge planning volume for the IC as required under the Navy's tiered response strategy. The NAS Corpus Christi Contingency Plan addresses the response to the worst-case discharge at this facility. Appendix C contains the derivation of the discharge planning volumes for this FRP.

#### 4.2 Small and Medium Discharges

Table FRP 4.1 Discharge Planning Volumes		
Oil Type	Size Classification	Spill Volume
I	Small Spill	2,100 gal
	Medium Spill	36,000 gal

Table FRP 4.2 Small Discharge Scenarios for Transfer Facilities		
Tank Truck Loading Facility		
Potential Spill Volume (gal): Up to 2,100 gals	Type of Oil: JP-5	Potential for Spill: Medium
Potential Spill Causes	Equipment failures, leaks, malfunctions, and operator errors	
Possible Chain Reaction of Failures	None evident	
Location of Material Spilled	Small spills should be contained by the curbed concrete catchment system	
Spill Pathways and Likelihood of Spill Traveling Offsite	<ul style="list-style-type: none"><li>See Figures in FRP, Tab 18 for the potential spill pathways if a spill escapes containment.</li><li>Not likely that a small spill will travel offsite due to the spill volume and the containment system</li></ul>	
Potential Receiving Navigable Waters	Cayo Del Oso and Corpus Christi Bay	
Proximity of Sensitive Area/Resources	See ERAP, Tab J, Figures	

<b>Table FRP 4.3</b> <b>Small Discharge Scenarios for Transfer Facilities</b>		
<b>NAS Corpus Christi Fuel Pump Station</b>		
<b>Potential Spill Volume (Gal):</b> <b>Up to 2,100 Gals</b>	<b>Type of Oil: JP-5</b>	<b>Potential for Spill: Medium</b>
Potential Spill Causes	Equipment failures, leaks, malfunctions, and operator errors	
Possible Chain Reaction of Failures	None evident	
Location of Material Spilled	Small spills should be contained by the curbed concrete catchment system	
Spill Pathways and Likelihood of Spill Traveling Offsite	<ul style="list-style-type: none"> <li>See Figures in FRP Tab 18 for the potential spill pathways if a spill escapes containment.</li> <li>Not likely that a small spill will travel offsite due to the spill volume and the containment system</li> </ul>	
Potential Receiving Navigable Waters	Cayo Del Oso and Corpus Christi Bay	
Proximity of Sensitive Area/resources	See ERAP, Tab J, Figures	

<b>Table FRP 4.4</b> <b>Small Discharge Scenarios for Transfer Facilities</b>		
<b>Other NAS Corpus Christi In-plant Piping and Other Transfer Equipment</b>		
<b>Potential Spill Volume (gal):</b> <b>Up to 2,100 gals</b>	<b>Type of Oil: JP-5</b>	<b>Potential for Spill: Medium</b>
Potential Spill Causes	Leaks from valves, flanges, and fittings; pressure relief valve actuation due to abnormal operating conditions or malfunctions; improper repairs to and maintenance of valves, flanges, fittings, packing, etc.; accidental damage	
Possible Chain Reaction of Failures	None evident	
Location of Material Spilled	Spills will be to the ground.	
Spill Pathways and Likelihood of Spill Traveling Offsite	<ul style="list-style-type: none"> <li>See Figures in FRP, Tab 18 for the potential spill pathways.</li> <li>Spills can quickly travel offsite if they drain into the tidal ditches with water.</li> <li>Spills onto the ground can also migrate offsite by percolating into the groundwater.</li> </ul>	
Potential Receiving Navigable Waters	Cayo Del Oso and Corpus Christi Bay	
Proximity of Sensitive Area/resources	See ERAP, Tab J, Figures	

<b>Table FRP 4.5</b> <b>Small Discharge Scenarios for Bulk Oil Storage Facility</b>		
<b>Tanks and Associated Equipment Within Dike Basins</b>		
<b>Potential Spill Volume (gal):</b> <b>Up to 2,100 gals</b>	<b>Type of Oil: Fuel Oil No. 2/JP-5</b>	<b>Potential for Spill: Medium</b>
Potential Spill Causes	Tank overfills from valve misalignment and gauging errors; leaks from valves, flanges and fittings; improper repairs to and maintenance of valves, flanges, and fittings; accidental damage	
Possible Chain Reaction of Failures	None evident	
Location of Material Spilled	Spills will be contained in the dike basins.	
Spill Pathways and Likelihood of Spill Traveling Offsite	<ul style="list-style-type: none"> <li>• See Figures in FRP, Tab 18 for the potential spill pathways through the dike drainage discharge valves.</li> <li>• Not likely that a small spill will travel offsite through surface drainage due to the spill volume and the containment dikes for the bulk storage tanks</li> <li>• Since the dike basin floors are not impervious, spills can migrate offsite by percolating into the groundwater.</li> </ul>	
Potential Receiving Navigable Waters	Cayo Del Oso and Corpus Christi Bay	
Proximity of Sensitive Area/resources	See ERAP, Tab J, Figures	

<b>Table FRP 4.6</b> <b>Small Discharge Scenarios Nonbulk Storage Tank Sites</b>		
<b>All Other Aboveground Tanks</b>		
<b>Potential Spill Volume (gal):</b> <b>Up to 2,000 gals</b>	<b>Type of soil: JP-5 and Fuel Oil No. 2</b>	<b>Potential for Spill: Low</b>
Potential Spill Causes	Tank overfills from valve misalignment, gauging, and operator errors; leaks from pumps, valves, flanges, and fittings; improper repairs to and maintenance of valves, flanges, and fittings; accidental damage to equipment and equipment failures	
Possible Chain Reaction of Failures	None evident	
Location of Material Spilled	<ul style="list-style-type: none"> <li>Spills will be contained in the various concrete containment systems for the tanks</li> <li>Spills from tanks with no containment will be to the surrounding ground.</li> </ul>	
Spill Pathways and Likelihood of Spill Traveling Offsite	<ul style="list-style-type: none"> <li>See Figures in FRP, Tab 18 for the potential spill pathways for spills from the various tanks.</li> <li>Not likely that spills from nonbulk tanks will travel offsite through surface drainage due to some containment systems for these tanks; it is also unlikely that a spill of the entire contents of such tanks travel offsite through surface drainage due to the quantity involved, unless the spill occurred when there is water runoffs, e.g., during intense rain.</li> <li>Spills from W-5 could migrate offsite by percolating into the groundwater.</li> </ul>	
Potential Receiving Navigable Waters	Cayo Del Oso and Corpus Christi Bay	
Proximity of Sensitive Area/resources	See ERAP, Tab J, Figures	

<b>Table FRP 4.7</b> <b>Medium Discharge Scenarios for Transfer Facilities</b>		
<b>Receiving and Dispersing Piping and Other Transfer Equipment</b>		
<b>Potential Spill Volume (gal):</b> <b>Up to 3,000 gals</b>	<b>Type of Soil JP-5/Fuel Oil No. 2</b>	<b>Potential for Spill: Medium</b>
Potential Spill Causes	Leaks from valves, flanges, and fittings; pressure relief valve actuation due to abnormal operating conditions or malfunctions; improper repairs to and maintenance of valves, flanges, fittings, packing, etc.; accidental damage and fire and explosions	
Possible Chain Reaction of Failures	A fire or explosion can spread to other equipment at the facility, depending on incident, location, and effectiveness of fire mitigation procedures.	
Location of Material Spilled	Spills will be to the ground.	
Spill Pathways and Likelihood of Spill Traveling Offsite	<ul style="list-style-type: none"> <li>• See Figures in FRP, Tab 18 for the potential spill pathways.</li> <li>• Spills can quickly travel offsite if they drain into the tidal ditches with water.</li> <li>• Spills onto the ground can also migrate offsite by percolating into the groundwater.</li> </ul>	
Potential Receiving Navigable Waters	Cayo Del Oso and Corpus Christi Bay	
Proximity of Sensitive Area/resources	See ERAP, Tab J, Figures	

<b>Table FRP 4.8</b> <b>Medium Discharge Scenarios for Bulk Oil Storage Facility</b>		
<b>Tanks and Associated Equipment Within Dike Basins</b>		
<b>Potential Spill Volume (gal):</b> <b>Up to 36,000 gals</b>	<b>Type of Oil: JP-5/Fuel Oil No. 2</b>	<b>Potential for Spill: Medium</b>
Potential Spill Causes	Tank overfills from valve misalignment and gauging errors; failures and ruptures of valves, flanges, fittings, and other equipment; accidental damage to include equipment damage from storms and lightning strikes; fires and explosions	
Possible Chain Reaction of Failures	A fire or explosion can spread to other equipment at the facility, depending on incident, location, and effectiveness of fire mitigation procedures.	
Location of Material Spilled	Spills will be contained in the dike basins.	
Spill Pathways and Likelihood of Spill Traveling Offsite	<ul style="list-style-type: none"> <li>• See Figures in FRP, Tab 18 for the potential spill pathways through the dike drainage discharge valves.</li> <li>• It is unlikely that spills will travel offsite through surface drainage due to the spill volume and the containment dikes for the bulk storage tanks</li> <li>• Since the dike basin floors for 1720-1 and 1720-2 are impervious, spills will probably not migrate offsite by percolating into the groundwater.</li> </ul>	
Potential Receiving Navigable Waters	Cayo Del Oso and Corpus Christi Bay	
Proximity of Sensitive Area/resources	See ERAP, Tab J, Figures	

#### 4.3 Worst-Case Discharge

<b>Table FRP 4.9</b> <b>Discharge Planning Volume</b>	
<b>Worst-case Discharge (gal)</b> <b>Type I Oil</b>	<b>864,658</b>

**Note:** Tables FRP 4.10 through 4.16 present a summary of Worst-case discharge scenarios for various NAS Corpus Christi operations. A descriptive worst-case scenario follows Table FRP 4.16 detailing an oil tank incident.

<b>Table FRP 4.10</b> <b>Worst-case Discharge Scenarios for Transfer Facilities</b>		
<b>Tank Truck Loading Facility</b>		
<b>Potential Spill Volume (gal):</b> <b>Up to 10,000 gals</b>	<b>Type of Oil: JP-5</b>	<b>Potential for Spill: Medium</b>
<b>Potential Spill Causes</b>	Equipment failures, leaks, malfunctions, and operator errors	
<b>Possible Chain Reaction of Failures</b>	None evident	
<b>Location of Material Spilled</b>	Spills should be contained by the curbed concrete catchment system	
<b>Spill Pathways and Likelihood of Spill Traveling Offsite</b>	<ul style="list-style-type: none"><li>• See Figures in FRP, Tab 18 for the potential spill pathways if a spill escapes containment.</li><li>• Not likely that a large volume will travel offsite due to the spill volume and the containment system</li></ul>	
<b>Potential Receiving Navigable Waters</b>	Cayo Del Oso and Corpus Christi Bay	
<b>Proximity of Sensitive Area/resources</b>	See ERAP, Tab J, Figures	

<b>Table FRP 4.11</b> <b>Worst-case Discharge Scenarios for Bulk Oil Storage Facility</b>		
<b>Facility Maintenance Operations</b>		
<b>Potential Spill Volume (Gal):</b> <b>Up to 8,000 gals</b>	<b>Type of Oil: Fuel Oil No. 2/JP-5</b>	<b>Potential for Spill: Medium</b>
Potential Spill Causes	Improper maintenance that does not isolate or evacuate oil associated with valves, piping, and tanks; leaks from valves, flanges and fittings; improper repairs to and maintenance of valves, flanges, and fittings; accidental damage.	
Possible Chain Reaction of Failures	None evident	
Location of Material Spilled	Spills will be contained in any associated dike basins	
Spill Pathways and Likelihood of Spill Traveling Offsite	<ul style="list-style-type: none"> <li>• See Figures in FRP, Tab 18 for the potential spill pathways through the dike drainage discharge valves or from AST locations.</li> <li>• Not likely that spills will travel offsite through surface drainage due to the spill volume and the containment dikes for the bulk storage tanks</li> <li>• Since the dike basin floors are not impervious, spills can migrate offsite by percolating into the groundwater.</li> </ul>	
Potential Receiving Navigable Waters	Cayo Del Oso and Corpus Christi Bay	
Proximity of Sensitive Area/resources	See ERAP, Tab J, Figures	

<b>Table FRP 4.12</b> <b>Worst-case Discharge Scenarios for Transfer Facilities</b>		
<b>Other NAS Corpus Christi In-plant Piping and Other Transfer Equipment</b>		
<b>Potential Spill Volume (gal):</b> <b>Up to 8,000 gals</b>	<b>Type of Oil: JP-5</b>	<b>Potential for Spill: Medium</b>
Potential Spill Causes	Leaks from valves, flanges, and fittings; pressure relief valve actuation due to abnormal operating conditions or malfunctions; improper repairs to and maintenance of valves, flanges, fittings, packing, etc.; accidental damage	
Possible Chain Reaction of Failures	None evident	
Location of Material Spilled	Spills will be to the ground.	
Spill Pathways and Likelihood of Spill Traveling Offsite	<ul style="list-style-type: none"> <li>• See Figures in FRP, Tab 18 for the potential spill pathways.</li> <li>• Spills can quickly travel offsite if they drain into the tidal ditches with water.</li> <li>• Spills onto the ground can also migrate offsite by percolating into the groundwater.</li> </ul>	
Potential Receiving Navigable Waters	Cayo Del Oso and Corpus Christi Bay	
Proximity of Sensitive Area/resources	See ERAP, Tab J, Figures	

<b>Table FRP 4.13</b> <b>Worst-case Discharge Scenarios for Transfer Facilities</b>		
<b>NAS Corpus Christi Fuel Pump Station</b>		
<b>Potential Spill Volume(gal):</b> <b>Up to 300-400 gals</b>	<b>Type of Oil: JP-5</b>	<b>Potential for Spill: Medium</b>
Potential Spill Causes	Equipment failures, leaks, malfunctions, and operator errors  Volume is limited by the maximum transfer rate of 300-400 gals/min and shut down in less than 1 minute.	
Possible Chain Reaction of Failures	None evident	
Location of Material Spilled	Small spills should be contained by the curbed concrete catchment system	
Spill Pathways and Likelihood of Spill Traveling Offsite	<ul style="list-style-type: none"> <li>• See Figures in FRP Tab 18 for the potential spill pathways if a spill escapes containment.</li> <li>• Not likely that a small spill will travel offsite due to the spill volume and the containment system</li> </ul>	
Potential Receiving Navigable Waters	Cayo Del Oso and Corpus Christi Bay	
Proximity of Sensitive Area/resources	See ERAP, Tab J, Figures	

<b>Table FRP 4.14</b> <b>Worst-Case Discharge Scenarios Transfer Facilities</b>		
<b>Vehicle Refueling Operations</b>		
<b>Potential Spill Volume (gal):</b> <b>Up to 100 gals</b>	<b>Type of Oil: Unleaded Gasoline</b>	<b>Potential for Spill: Low</b>
Potential Spill Causes	Vehicle tank overfills from improper oversight and operator errors; leaks from pumps, valves, and hoses; improper repairs to and maintenance of vehicle fuel tanks, and accidental damage to vehicle fuel tanks	
Possible Chain Reaction of Failures	None evident	
Location of Material Spilled	<ul style="list-style-type: none"> <li>• Small spills will be contained by the concrete apron at the refueling stations</li> <li>• Spills of sufficient volume can flow off concrete aprons and impact surrounding ground.</li> </ul>	
Spill Pathways and Likelihood of Spill Traveling Offsite	<ul style="list-style-type: none"> <li>• See Figures in FRP, Tab 18 for the potential spill pathways.</li> <li>• Not likely that spills will travel offsite through surface drainage due to small volume; it is also unlikely that a spill of the entire contents of such tanks travel offsite through surface drainage due to the fact that fueling pumps have an emergency shut-off.</li> <li>• Spills from could migrate offsite by percolating into the groundwater.</li> </ul>	
Potential Receiving Navigable Waters	Cal del Oso and Corpus Christi Bay	
Proximity of Sensitive area/resources	See ERAP, Tab J, Figures	

<b>Table FRP 4.15</b> <b>Worst-case Discharge Scenarios for Storage Tank Sites</b>		
<b>Age and Condition of Facility and Components</b>		
<b>Potential Spill Volume (gal):</b> <b>Up to 776,289 gals</b>	<b>Type of Oil: JP-5 and Fuel Oil No. 2</b>	<b>Potential for Spill: Low</b>
Potential Spill Causes	Various failures of tank walls, pumps, piping, valves, flanges, associated equipment, and fittings due to age or poor material condition.	
Possible Chain Reaction of Failures	None evident.  Very unlikely that the entire system would fail at the same time.	
Location of Material Spilled	<ul style="list-style-type: none"> <li>Spills from will be contained in the various concrete containment systems for the tanks.</li> <li>Spills from tanks, associated equipment and piping with no containment will be to the surrounding ground.</li> </ul>	
Spill Pathways and Likelihood of Spill Traveling Offsite	<ul style="list-style-type: none"> <li>See Figures in FRP, Tab 18 for the potential spill pathways for spills from the various components.</li> <li>Not likely that spills from nonbulk tanks will travel offsite through surface drainage due to some containment systems for these tanks; it is also unlikely that a spill of the entire contents of such tanks travel offsite through surface drainage due to the quantity involved, unless the spill occurred when there is water runoffs, e.g., during intense rain.</li> <li>Spills from non-contained spills could migrate off the site by percolating into the groundwater.</li> </ul>	
Potential Receiving Navigable Waters	Cal del Oso and Corpus Christi Bay	
Proximity of Sensitive Area/resources	See ERAP, Tab J, Figures	

<b>Table FRP 4.16</b> <b>Worst Case Discharge Scenarios for Bulk Oil Storage Facility</b>		
<b>All ASTs Taken Together</b>		
<b>Potential Spill Volume (gal):</b> <b>Up to 766,289 gals</b>	<b>Type of Oil: Mixed</b>	<b>Potential for Spill: Low</b>
Potential Spill Causes	Catastrophic damage to tanks resulting from a storm, flooding, fire, or explosion.	
Possible Chain Reaction of Failures	Not applicable	
Location of Material Spilled	Initially, spills will be into the various dike basins and then onto the ground of the facility, e.g., if the dikes are damaged and/or filled with water or as a result of a tank collapse	
Spill Pathways and Likelihood of Spill Traveling Offsite	<ul style="list-style-type: none"> <li>• See Figures in FRP, Tab 18 for the potential spill pathways.</li> <li>• Such spills will most likely reach navigable waters around the facility.</li> <li>• The spill will also migrate offsite by percolating into the groundwater.</li> </ul>	
Potential Receiving Navigable Waters	Cayo Del Oso and Corpus Christi Bay.	
Proximity of Sensitive Area/resources	See ERAP, Tab J, Figures	

#### **4.3.1 Worst-Case Spill Response Scenario: Bulk Tank(s) 1720-1/2 JP-5**

##### **Description of Spill Event**

In mid-April, with some water accumulated in the dike area around Tanks 1720-1/2 after a heavy rain, Tank 1720-1 ruptures and discharges its contents. The temperature differentials between day and night are not sufficient to stress the discharge piping on the other tank, 1720-2, so the cause is unknown. The tanks are filled as listed: Tank 1720-1, 100% and Tank 1720-2, 75%. However, a fracture stress in the shell skin of Tank 1720-1 causes a rupture and results in a discharge. By 0600, all of the tank contents, 250,000 gallons of JP-5, have discharged into and away from the impounding basin.

The diked area is normally sufficient to hold 154,252 gallons, which is 61% of the volume of Tank 1720-1. However, the way the tank parted down the side and the presence of some water from a very heavy rain, a "wave of oil" of 125,000 gallons overflows the dike wall. Most of the spill flows away from the area and soaks into the ground. But, due to the heavy rainfall at the time of the spill, JP-5 and water flows toward the storm sewer drain to the north-west of the Fuel Farm. Runoff carries the JP-5 with it into the drain, which empties into Oso Bay.

##### **Discovery and Notification**

At 0700, the Fuel Farm watch smells "oil" and notices standing JP-5 in the diked area, sees the damaged tank, and can see the flow away from the dike. The Fuel Farm personnel, immediately notify the NAS Fuel Farm superintendent and the Fire Department watch, and the NAS Corpus Christi response plan is activated.

Since the source of the spill is known, but the extent of impact is not, the Fire Department and Fuel Farm watch organizes a reconnaissance team of three personnel and dispatches it to search out the extent of the spill, if it can be done safely.

The reconnaissance team discovers that Tank 1720-1 completely collapsed and that there has been a discharge out of the diked area. The product has flowed into the impounding basin, but the basin did not contain all the JP-5. The recon team notifies Fire Department personnel via VHF radio.

The Fuel Farm Superintendent notifies the initial Incident Commander, and that individual assists in making the following notifications:

- the NRC in Washington, D.C. (following the notification form)
- the NAS Corpus Christi Security
- the NAS Corpus Christi Fire Department
- the predesignated NAS Corpus Christi Incident Commander
- the Coast Guard Marine Safety Office (MSO) in Corpus Christi
- the Environmental Protection Agency (EPA), Region VI
- All off-duty Fuel Terminal, Fire Department, and Hazardous Waste/Environmental Support personnel are recalled, as necessary

## **Spill Assessment**

While the Fire Department/Fuel Farm Watch makes notifications and begins activating of the facility response team, the reconnaissance team assesses the spill severity.

**30 minutes after discovery of the spill**, the reconnaissance team inspects the shore line area along the discharge of the storm sewer drain into Oso Bay and the adjacent area to assess if any of the spilled JP-5 has found a route to the Bay and to seek out the extent of the spill. During this inspection, other team members determine the level of oil in the berm area and discover that the spill has migrated into the soil. The recon team notifies Fire Department that most of the tank contents was released and up to 125,000 gallons have flowed out of the bermed area onto the surrounding ground and toward the storm sewer drain. It is not known how much has entered the storm sewer drain and flowed toward Oso Bay.

The NAS Corpus Christi Fire Department arrives on scene and positions its equipment for fire suppression. The extinguishing agent of choice for use at this facility is foam. The IC immediately provides follow-up information to Texas General Land Office representatives, the NRC, and CNATRA. The Fire Department then requests the activation of the Corpus Christi Area Oil Spill Control Association, the NAS Corpus Christi Response Team, and notification of NAVSUPSALV and response contractors that are accessible via a letter agreement with MSO Corpus Christi. All are requested to come on-scene as soon as possible. Although the Fire Department/Incident Commander has not received information on the extent of migration of the spill, he has assumed that local NAS Corpus Christi capabilities have been exceeded. This assumption is based on a conservative approach to spill response and to guarantee that enough equipment is available for the response. **One hour has elapsed since discovery of the spill.**

The Industrial Hygienist arrives on scene and conducts a survey of the spill area, starts air monitoring, and develops a safety plan.

## **Secure the Source**

**One hour after discovery of the spill**, the NAS Corpus Christi IC arrives on-scene and assumes the duties of the Incident Commander.

Since tank 1720-1 was nearly full and most of the JP-5 remains in the impounding basin, initial mitigation efforts focus on recovering as much of the spilled product as soon as it is practical. Additionally, to prevent more possible movement in or on the ground, berming is initiated near the storm sewer culvert and the Fuel Farm. Because the spilled product, JP-5 has a flash point of well above 140°F, it does not pose an immediate fire/health safety risks. However, safety is still the first consideration. The IC determines that the standing material presents a moderate fire hazard and any JP-5 vapors present may explode if ignited in an enclosed area. The IC consults with the NAS Corpus Christi fire chief to determine where to safely locate any pumping or skimming/pumping equipment so that the fire department can provide fire protection support. The fire chief recommends that because of the area of spillage and the number of uncontrolled ignition sources in the area, the spill should be removed as quickly as possible. The fire chief also points out that any sorbent material used during containment and cleanup operations must be considered flammable and treated accordingly. The fire chief also recommends that a layer of water be put into the diked areas to lift the remaining JP-5 in the containment basin from the ground. This action should reduce or prevent migration into the ground. Additionally, it is recommended that sorbents be placed along the flow path leading to the storm sewer drain near the Fuel Farm.

**One hour and 30 minutes after discovery of the spill, the IC activates the ICS Response Team Command Staff.**

The recon team has continued its investigation and reports that there has not been any apparent impact into Oso Bay. However, the storm sewer drain appears to have been heavily impacted.

The Operations Section Chief arrives on scene.

The IC decides that he must attempt to contain as much of the spilled product near the Fuel Farm as possible and to berm the storm sewer culvert area. The IC instructs the Operations Section Chief to have equipment moved to the berm area for pump off with VAC trucks as soon as it is safe, and to remove as much free product as possible from the storm sewer culvert area. The IC has determined that this will be the most effective method for containment since the dike appears to be holding the spilled JP-5 and there is no other way of draining the berm area. The Operations Section Chief is to coordinate the pump off of the dike area with assistance of the fire chief, who will provide fire protection. **Three hours have elapsed since discovery of the spill.**

### **Spill Response**

**Two hours after discovery of the spill, the Planning Section Chief develops a site-specific health and safety plan with the assistance of the Safety Officer and the Industrial Hygienist.**

A schedule is established for security checks of the integrity of the impounding basin and the security perimeter around the storm sewer culvert area. The security checks will be made every 15 minutes.

The IC establishes a command post at the Fuel Farm Building and instructs the Security Section Chief, with the NAS Corpus Christi Military Police, to secure the area and limit site access. Only NAS Corpus Christi Response team; other federal, state, and select government representatives, response contractor personnel; fire department personnel; and NAS Corpus Christi police department personnel are permitted to enter the command post area. The command post will be the location for the unified command that will coordinate all federal, state, local response efforts. If the incident runs a long time or if a health and safety issue may result from the close proximity to the spill site, then the Command Post will be moved into available spaces in the Environmental Engineering building.

The Coast Guard Port Operations Officer (FOSC's representative) arrives on scene along with a representative from the Texas General Land Office. The IC briefs both of the cause, extent of the spill, and the response actions being taken. EPA representatives will assess the tank failure in the near future.

The IC instructs the Operations Section Chief to conduct air surveillance in the Oso Bay area to ensure that there has been no release into navigable waters. The Operations Section Chief, the Planning Section Chief, and the Air Operations Group Supervisor develop an overflight plan for the Oso Bay area. Since the spill was discovered 1 hour after the start of the flood tide, the overflight plan covers the Oso Bay west of NAS Corpus Christi. **Three hours have elapsed since discovery of the spill.**

Response contractors begin to arrive. The Operations Section Chief briefs the supervisor from each contractor on the status of the spill. The Operations Section Chief divides the contractors into two teams.

The Air Operations Group Supervisor contacts Air Operations and arranges for a helicopter for overflight operations. He briefs the pilot on the overflight plan.

The first contractor response team is deployed to the storm sewer drain area to construct an earthen dam to prevent any rainwater and JP-5 mixture from entering the culvert. A back-hoe and front-end loader arrive on scene and are sent to assist in the construction of the dam on the flow path towards the storm sewer drain near the Fuel Farm. The fire department dispatches a pumper truck to the scene to provide fire protection from any fumes in the storm sewer system. A VAC truck is requested to assist with recovery at the outfall from the storm sewer system as a flushing procedure is being developed.

An oil spill observer accompanies the helicopter launch for overflight operations.

A second contractor response team is sent to the Fuel Farm berm along with a second fire department truck pumper. The fire department will provide fire protection during fuel recovery operations at this location. **Four hours have elapsed since discovery of the spill.**

A response contractor team deploys sorbent boom on top of that laid down by Fire Department/Facility Response team personnel in the flow path and then at the storm sewer outfall into Oso Bay. Additional booming is positioned at the storm sewer drainage outfall as a precautionary step.

A second VAC truck from a contractor arrives and is sent to the response team working in the trench near the storm sewer drain to begin to recover oil. Recovered oil from this operation will be temporarily stored in tank 13-1/2 depending on the makeup of the recovered product. It is quickly determined that a single VAC truck will not be sufficient for cleanup at the Fuel Farm due to the volume of material in the berm area.

The overflight helicopters report. The helicopters have covered both shores of Oso Bay and do not see any slicks or evidence of a spill. **Five hours have elapsed since discovery of the spill.**

The IC requests that a beach walk be deployed for a closer inspection along the beach face near the storm sewer outfall. Additionally, the boom is rigged for the "ready" at the mouth of Oso Bay in case there is a discharge from the storm sewer.

Contractor response personnel are assigned to bird hazing since the terminal is surrounded by nesting areas.

The Operations Section develops defensive boom strategies for the local area in accordance with the ACP, as a precautionary step. CCAOSCA will be consulted along with other members of the local Area Contingency Planning Committee to maximize use of all deflection boom. This is a preventive measure in anticipation of migrating oil from the storm sewer, since the amount of JP-5 in the drainage system is not known. An additional trench is cut across the drainage path as it leads away from the Fuel Farm area to intercept any migrating ground contamination. **Six hours have elapsed since discovery of the spill.**

Portable lights are brought to the cleanup site along the ditch so that onshore recovery may continue after dark. A safety plan for after sunset operations is developed.

Relief contractor response personnel arrive on scene, along with relief NAS Corpus Christi Response Team personnel.

All VAC-trucks have been serviced during the day and are in standby status pending any deployment if additional recoverable material is detected. **Eight hours have elapsed since discovery of the spill.**

Relief contractor response personnel arrive on scene.

The tide changes from flood to ebb.

Recon personnel complete another survey of the shoreline and detect no discharge of oil from where the storm sewer empties into Oso Bay. Darkness has set in and survey efforts are suspended for the night. **Twelve hours have elapsed since discovery of the spill.**

The interception trench near the Fuel Farm continues to recover product that is VAC trucked away. **Sixteen hours have elapsed since discovery of the spill.**

Arrangements are made for recovered JP-5 to be stored in temporary holding tanks from CCAOSCA or 13-1/2, depending on the level of contamination of the product. **Eighteen hours have elapsed since discovery of the spill.**

VAC truck operations start up at first light. It is estimated that 15% of the JP-5 has evaporated and 15% has soaked into the soil, leaving approximately 106,250 gallons to be recovered from the secondary containment and 87,500 gallons from the soil and storm sewer area.

The tide changes from flood to ebb.

A second overflight is ordered to cover Oso and Corpus Christi Bays and verify that there has been no water impact. **Twenty-four hours have elapsed since discovery of the spill.**

A helicopter is launched from the airfield. **Twenty-five hours elapsed since discovery of the spill.**

Helicopter one reports no oil slicks are seen. Shoreline surveys reveal no seepage toward the water. **Twenty-six hours have elapsed since discovery of the spill.**

Recon teams complete another survey and find no seepage along the potential source areas. VAC trucks continue to remove product from the impoundment area and near the storm sewer culvert. **Thirty hours have elapsed since discovery of the spill.**

A disposal plan and remediation plan are being discussed for the soil removed near the Fuel Farm.

Initial on-shore cleanup operations in the storm sewer area are completed. Recovered JP-5 from this location will be evaluated for offloading into 13-1/2.

Relief contractor response personnel arrive on scene. **Forty hours have elapsed since discovery of the spill.**

The initial response is completed and the spill is contained. The remainder of the operation involves the cleanup and disposal of the oil and oil-contaminated debris.

### **Wildlife Considerations**

Even though the immediate NAS Corpus Christi Fuel Farm area is not a nesting area for gulls, the spring migration had not yet reached its peak at the time of the spill. However, during the initial assessment of the spill, the Terminal Superintendent noted that several gulls had landed around the facility. Initially, before implementing a formal deterrent program, one person was assigned to scare the birds away, but this proved to be very time-consuming and somewhat ineffective.

After his arrival on scene, the IC had the Planning Section Chief and the Liaison Officer consult with Texas representatives and the U.S. Fish & Wildlife Service on hazing, capture, and rehabilitation activities to be pro-active. A plan was developed for implementation, if it became necessary to start up a program. Permission is given to use shoreline hazing teams if the shoreline becomes oiled. Exploders, shell crackers, and whistle bombs are used to scare birds from impacted shorelines. To deter birds from landing at the facility, recorded alarms and distress calls would be broadcast over a speaker system. **Five hours have elapsed since discovery of the spill.**

#### **Shoreline Cleanup**

Since the released JP-5 has not moved totally through the storm sewer system and into Oso Bay, Response Team and contractor personnel are used to clean debris from the shoreline near the outfall. This action is to minimize the amount of contaminated debris that may have to be dealt with if the released oil continues to migrate toward the water. The recovered debris is placed in regular trash bins and hauled away with the NAS's trash trucks. Clean up workers continue to use sorbents to pick up JP-5 oily waste from the impacted ground. The sorbents are put into 55-gallon open-head steel drums for temporary storage and readied for proper disposal.

#### **Damage Assessment and Restoration**

The IC, the FOSC, and a representative from the Texas General Land Office survey the area to determine the extent of restoration needed. Additional assessments are made by small boat to ensure no shoreline has been impacted. Arrangements are made with the response contractors for restoration of the impacted areas; i.e. clean fill, etc.

**Seventy-two hours after spill detection:** The IC, the FOSC, and a representative from Texas determine that all of the JP-5 released has either dissipated, evaporated, or is scheduled to be recovered from the soil. It is determined that the emergency is over and a remediation project should be commenced.

#### 4.4 Weather and Aquatic Conditions Impacting Spill Response

<b>Table FRP 4.17</b> <b>Weather and Aquatic Conditions Impacting Spill Response</b>					
Condition	Season				Limitations
	SP	SU	F	W	
Predominant Winds				X	Strong northeast winds; cold fronts can generate winds with speeds greater than 28 kts from Nov-Mar
Electrical Storms/Thunderstorms	X	X			No response possible; arrive quickly or suddenly with strong gusty winds and can be accompanied with hail, water spouts, or even tornadoes
Hurricanes		X	X		No response possible
Temperature Range					
Current Speed: Exceptionally strong currents in the winter; wave heights can exceed 10 ft about 3% to 8% of time from Nov-Mar.					
Other Conditions and Limitations: Worst time of year for conducting a spill response is in the winter; the water levels are low and the tide projections are inaccurate in the winter; fog poses an additional winter hazard					
Other Important Factors to Consider					
<ul style="list-style-type: none"> <li>Many species of birds, fish, crustaceans, and shellfish, reptiles, and amphibians depend on the area marshlands as nursery and feeding grounds.</li> <li>Sensitive areas are well in reach of spill impacts from NAS Corpus Christi.</li> <li>Even though most jet fuel products evaporate quickly, they are highly toxic to the marshlands environment.</li> <li>Cleanup in a marsh is next to impossible without causing greater damage through cleanup efforts. All precautions must be taken to prevent a spill from entering the surrounding marshlands.</li> <li>Spills during fall and winter are somewhat less damaging to the ecosystem because the vegetation is in the dormant stage and juvenile stages of species are low in abundance. Recovery from a winter spill is also faster than a spring, summer, or fall spill due to the fact that vegetation will slough off damaged tissue and regenerate quite readily.</li> </ul>					

## TAB 5 — DISCHARGE DETECTION SYSTEMS

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## TAB 5 — DISCHARGE DETECTION SYSTEMS

### 5.0 GENERAL

The spill detection capabilities described in this section determine NAS Corpus Christi's ability to detect or discover spills. The initial goal of a response is to stop the flow and deploy resources to recover oil and minimize harm to the environment. Prompt detection of spills is critical.

### 5.1 Discharge Detection by Personnel

Table FRP 5.1 Discharge Detection by Personnel					
Detection Method		Frequency	Techniques Used	Person Performing	Comments
Integrity Testing	Horizontal ASTs	As required	As required	To be determined	
	Vertical ASTs	As required	As required	To be determined	
	All NAS Corpus Christi Pipelines	Annually	Pressure testing	To be determined	
	Transfer Hoses	Semiannually	Hydrostatic pressure testing	Fuel Farm personnel	
Other Testing/detection Methods:					
• Inventory control		Monthly	Hand gauging storage tanks	Fuel operators	
• Issue/Receipt reconciliation		During transfers	Hand gauging active storage tanks before, during (hourly) and after transfer operation	Fuel operators	
• Gauging		Daily	Recording and comparing sight gauge readings for inactive tanks	Fuel operators	
		Monthly sampling	Sample collection and analysis	NAS contractor	
AST Exterior Observation		Daily	Visual inspection	To be determined	
AST Internal Inspections (out-of-service)		As required	As required	To be determined	
Appurtenance Examination (aboveground piping, valves, etc.)		Daily	Visual inspection	Fuel operators / Security personnel	
Other Inspections					
• Tank truck loading/offloading		During transfers	Visual inspections for leaks/spills during manned transfer operations	FISC personnel	

## **5.2 Automated Discharge Detection**

NAS Corpus Christi does not currently have any automated discharge detection systems.

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## TAB 6 — PLAN IMPLEMENTATION

### 6.0 RESPONSE RESOURCES

#### 6.1 Equipment Resources Required by OPA 90

This section identifies the response resources required to respond to the small, medium, and worst case planning volumes determined under the EPA OPA 90 regulations.

Each of the tables below identifies and demonstrates accessibility to one of the three types of response resources that must be addressed in accordance with 40 CFR 112 Appendix F and 33 CFR 154 Appendix C: oil recovery devices, boom, and temporary storage equipment. Each table states the regulatory requirements for each tiered discharge planning volume and describes how the requirements will be met.

See Appendix C of this FRP for the basis and derivations of the discharge planning volumes and response capability requirements.

NAS Corpus Christi has contracted CCAOSCA, a class B OSRO in Corpus Christi, to handle any oil spill response situation. See Appendix B for a copy of this contract. The response capabilities for a class B OSRO are presented in table ERAP F-12, Tab F.

Table FRP 6.1 Minimum Required Oil Recovery, Containment, and Temporary Storage Resources For Small Discharge			
Oil Recovery Requirement	<ul style="list-style-type: none"><li>• Daily Recovery Rate: 2,100 gal/day</li><li>• On Scene Within 2 Hrs of Detection</li></ul>		
Facility Oil Recovery Equipment Available to Meet Requirement	Equipment	Derated Capacity (Gal/day)	
	Ccaosca Equipment	52,500	
	Total De-rated Capacity (gal/day)	52,500	
Source/location of Equipment and Deployment Time	Corpus Christi Area Oil Spill Control Association. Corpus Christi, TX Response time = < 1 hr		
Facility Shortfall	Additional De-rated Capacity (gal/day)	Source	Time
	0 gal/day	N/A	N/A
	Total Additional Derated Capacity (gal/day)	N/A	

**Table FRP 6.1**  
**Minimum Required Oil Recovery, Containment, and Temporary Storage Resources**  
**For Small Discharge**

<b>Boom Requirements</b>	<u>Non-Transportation Related (NTR):</u> <ul style="list-style-type: none"> <li>• 1,000 Linear Ft</li> <li>• Means Of Immediate Deployment</li> </ul> <u>Marine-Transportation Related (MTR):</u> <ul style="list-style-type: none"> <li>• 2 X Length of Longest Vessel- <u>1,000</u> Ft</li> <li>• Means Of deploying and anchoring boom available at Facility within 1 Hr of spill detection</li> </ul>			
<b>Facility Booms Available to Meet Requirements</b>	<b>Boom Type</b>			<b>Total Length (ft)</b>
	Containment Boom 18"-24" (Nearshore)			12,000
	Protective Boom 18"-42" (Nearshore)			---
<b>Source/Location of Booms and Deployment Time</b>	Corpus Christi Area Oil Spill Control Association Response time = < 1 hr			
<b>Facility Shortfall</b>		<b>Additional Boom Requirement</b>		
<b>Type</b>	<b>Length (ft)</b>	<b>Source of Additional Type Booms</b>	<b>Total Length (ft)</b>	<b>Time</b>
None				
<b>Temporary Oil Storage Equipment Requirements</b>		<ul style="list-style-type: none"> <li>• 2 X Required Daily Oil Recovery Rate- <u>4,200</u> gal/day</li> <li>• On Scene within 2 Hrs of Spill detection</li> </ul>		
<b>Facility Temporary Oil Storage Equipment to Meet Requirements</b>	<b>Equipment</b>		<b>Total Capacity (gal)</b>	<b>Capacity (gal/day)</b>
	NAS Corpus Christi Tanks 13-1/13-2		400,000	4,200
	Ccaosca Tanks		105,000	4,200
	Available Capacity (Gal/day)		8,400	120
<b>Source/location of Storage Equipment and Deployment Time</b>	NAS Corpus Christi Boil Plant Tank 13-2/13-2 Corpus Christi Area Oil Spill Control Association Tankage Response time = < 1 hr			
<b>Facility Shortfall</b>		<b>Additional Equipment and Capacity (gal/day)</b>	<b>Time</b>	<b>Source</b>
<u>0</u> gal/day		N/A	N/A	N/A
		Total Additional Capacity (gal/day)	N/A	

Table FRP 6.2 Minimum Required Oil Recovery, Containment, and Temporary Storage Resources for Medium Discharge				
Oil Recovery Requirement	<ul style="list-style-type: none"><li>Daily Recovery Rate: (50% of The Medium/Maximum Most Probable Discharge Volume) gal/day = 18,000 gals</li><li>On Scene within 12 Hrs of Detection</li></ul>			
Facility Oil Recovery Equipment Available to Meet Requirement	Equipment	Derated Capacity (gal/day)		
	Ccaosca Equipment	52,500		
	Total De-rated Capacity (Gal/day)	52,500		
Source/location of Equipment and Deployment Time	Corpus Christi Area Oil Spill Control Association skimming equipment Response time = < 1 hour			
Facility Shortfall	Additional De-Rated Capacity (gal/day)	Source	Time	
0 gal/day	N/A	N/A	N/A	
	Total Additional Derated Capacity (gal/day)	N/A		
Boom Requirements	<ul style="list-style-type: none"><li>Sufficient quantities For Oil Collection, Containment, and Protection of Sensitive Areas (See Tab G, Table G.5)</li><li>On Scene within 12 Hrs of Detection</li></ul>			
Facility Booms Available to Meet Requirements	Boom Type		Total Length (ft)	
	Containment 18"-24" (Nearshore)		12,000	
	Containment 18"-42" (Nearshore)		----	
Source/location of Booms and Deployment Time	Corpus Christi Area Oil Spill Control Association Response time = < 1 hr			
Facility Shortfall		Additional Boom Requirement		
Type	Length (Ft)	Source of Additional Type Booms	Total Length (ft)	Time
To be determined		CCAOSCA members	11,000 River/Canal	6-8 hours
			12,500 Inland/Nearshore	6-8 hours

Table FRP 6.2 Minimum Required Oil Recovery, Containment, and Temporary Storage Resources for Medium Discharge				
Temporary Oil Storage Equipment Requirements	<ul style="list-style-type: none"><li>• 2 X Required Daily Oil Recovery Rate - 36,000 gal/day</li><li>• On Scene within 12 Hrs of Detection</li></ul>			
Facility Temporary Oil Storage Equipment to Meet Requirements	Equipment	Total Capacity (gal)	Capacity (gal/day)	No. Of Available Days
	NAS Corpus Christi Tank 13-1/13-2	400,000	36,000	10
	CCAOSCA Tankage	105,000	36,000	3
	Available Capacity (Gal/day)		72,000	13
Source/location of Storage Equipment and Deployment Time	NAS Corpus Christi Tank 13-1/13-2 Corpus Christi Area Oil Spill Control Association Tankage Response time = < 1 hr			
Facility Shortfall	Additional Equipment and Capacity (gal/day)	Time	Source	
_____ 0 _____ gal/day	N/A	N/A	N/A	
	Total Additional Capacity (gal/day)	N/A		

Table FRP 6.3 Minimum Required Oil Recovery, Containment, and Temporary Storage Resources for Worst-case Discharge					
Oil Recovery Requirement					
NTR Facility			MTR Facility		
Tier 1 gal/day	Tier 2 gal/day	Tier 3 gal/day	Tier 1 gal/day	Tier 2 gal/day	Tier 3 gal/day
25,940	43,233	69,173	N/A	N/A	N/A
On Scene Tier Times (Hrs)			On Scene Tier Times (Hrs)		
12	36	60	12	36	60

Table FRP 6.4 Facility Oil Recovery Equipment to Meet Requirement			
NTR Facility Tier	Equipment	De-Rated Capacity (gal/day)	On Scene Time (hrs)
Tier 1  (25,940 gals)	CCAOSCA Equipment	52,500	< 2
	Total Derated Capacity (gal/day)	52,500	
Tier 2  (43,233 gals)	NAVSUPSALV Equipment	34,826,652	< 12
	Total Derated Capacity (gal/day)	34,826,652	
Tier 3  (69,173 gals)	NAVSUPSALV Equipment	34,826,652	< 12
	Total Derated Capacity (gal/day)	34,826,652	
MTR Facility	Equipment	Derated Capacity (gal/day)	On Scene Time (hrs)
Tier 1, Tier 2 and Tier 3	Not Applicable	--	
Source/Location of Equipment	Corpus Christi Area Oil Spill Control Association Corpus Christi, Texas  NAVSUPSAVL		
Facility Shortfall			
MTR Facility Tier	Capacity (gal/day)	Source	Time
Tier 1-3	N/A	N/A	N/A
NTR Facility Tier	Capacity (gal/day)	Source	Time
Tier 1-3	None	N/A	N/A

Table FRP 6.5 Boom Requirements				
<ul style="list-style-type: none"><li>Sufficient Quantities for Oil Collection, Containment, and Shoreline Protection</li><li>On Scene within Specified Tiered Response Times</li></ul>				
Boom Type		Purpose		Required (ft)
Protection Boom		To protect sensitive areas		To be developed by ACP
Deflection Boom		To deflect movement of oil away from sensitive areas		To be developed by ACP
Facility Booms Available to Meet Requirements	Boom Type	Purpose	Length (ft)	
	Containment Boom 18"-24" (Nearshore)	Protection of sensitive areas	12,000	
	Protective Boom 18"-42" (Nearshore)	(From NAVSUPSALV)	9,900	
Source/location of Booms and Deployment Time		Corpus Christi Area Oil Spill Control Association Corpus Christi, Texas Response time = < 1 hr  NAVSUPSALV Response time = < 12 hrs		
Facility Shortfall				
Boom	Length (ft)	Purpose	Source	Time
To be determined	--	--	Will have to be developed, depending on definition of "Deflection Boom" and where Area Committee decides booming should be done.	--

Table FRP 6.6 Temporary Oil Storage Requirement					
NTR Facility			MTR Facility		
Tier 1 gal/day	Tier 2 gal/day	Tier 3 gal/day	Tier 1 gal/day	Tier 2 gal/day	Tier 3 gal/day
51,880	86,466	138,346	N/A	N/A	N/A
On-Scene Tier Times (hrs)			On-Scene Tier Times (hrs)		
12	36	60	12	36	60

Table FRP 6.7 Facility Oil Storage Equipment to Meet Requirement			
MTR Facility Tier	Equipment	Capacity (gal/day)	On- Scene Time (hrs)
Tier 1, Tier 2, and Tier 3	Not Applicable	N/A	
NTR Facility Tier	Equipment	Capacity (gal/day)	On- Scene Time (hrs)
Tier 1  (51,880 gals/day)	NAS Corpus Christi Tank 13-1/13-2	400,000	NA
	CCAOSCA Tankage	105,000	< 6
	Total Capacity (gal/day)	505,000 gal/day for 9 days	
Tier 2  (86,466 gals/day)	NAS Corpus Christi Tank 13-1/13-2	400,000	NA
	NAVSUPSALV	37,548,000	< 12
	Total Capacity (gal/day)	37,948,000 gal/day for 439 days	
Tier 3  (138,346 gals/day)	NAS Corpus Christi Tank 13-1/13-2	400,000	NA
	NAVSUPSALV	37,548,000	< 12
	Total Capacity (gal/day)	37,948,000 gal/day for 271 days	
Source/Location of Equipment	NAS Corpus Christi Oil Tank 13-2/13-2 Corpus Christi Area Oil Spill Control Association Total Tankage available NAVSUPSALV		
Facility Shortfall			
MTR Facility Tier	Capacity (gal/day)	Source	Time
Tier 1-3	N/A	--	--
NTR Facility Tier	Capacity (gal/day)	Source	Time
Tier 1-3	None		

## 6.2 Implementation of Response Actions

This section describes the implementation of this FRP for the small/average most probable and medium/maximum most probable discharges described in TAB 4.

<b>Table FRP 6.8</b> <b>Implementation of Response Actions for a Small Discharge</b> <b>Tank Truck Transfer Facility</b>		
<b>Phase</b>	<b>Description of Implementation Actions</b>	<b>Plan Section</b>
Emergency Phase	<u>Description of Actions</u> <ul style="list-style-type: none"> <li>Upon detecting discharge, the operator takes immediate actions to stop transfer operation by closing all loading stand valves; secure system and all ignition sources and contain spill within curbed concrete pad.</li> <li>Operator makes required notifications to terminal office using radios; office personnel will make correct notifications.</li> </ul> <u>Potential Problems and Recommended Corrective Actions</u> <p>If the oil curbing is not collecting fuel, the operator must block all drains near the truck transfer facility.</p>	ERAP, TAB D, Table ERAP D.9  FRP, TAB 4, Table FRP 4.2
	<u>Description of Actions</u> <ul style="list-style-type: none"> <li>FIC assesses spill for threat to human health and environment, monitors response, and makes required notifications.</li> <li>If spill reaches storm water drains, take actions to contain and recover at the ditch using available equipment.</li> </ul> <u>Potential Problems and Recommended Corrective Actions</u> <p>None foreseen.</p>	ERAP, TAB B TABLE ERAP B.1  ERAP, TAB F Tables ERAP F.1 - F.11  FRP, TAB 4 Table FRP 4.2
Cleanup Phase	<u>Description of Actions</u> <p>Facility Response Team completes spill recovery and cleanup.</p>	ERAP, Tab H
	<u>Potential Problems and Recommended Corrective Actions</u> <p>None foreseen.</p>	FRP, TAB 6 Section 6.3

**Table FRP 6.9**  
**Implementation of Response Actions for a Small Discharge**  
**Pump Station**

Phase	Description of Implementation Actions	Plan Section
Emergency Phase	<u>Description of Actions</u> <ul style="list-style-type: none"> <li>Upon detecting discharge, the operator takes immediate actions to stop transfer operations and cease any pumping by closing off all valves to pipelines; secure system and ignition sources and contain spill.</li> <li>Operator makes required notifications to terminal office using radios; office personnel will make correct notifications.</li> </ul>	ERAP, Tab D Table ERAP D.8  FRP, Tab 4 Table FRP 4.4  ERAP, Tab B Table ERAP B.1  ERAP, Tab C
	<u>Potential Problems and Recommended Corrective Actions</u>  If valves controlling curbed catchment discharge fail to completely block spill, operator should be prepared to block curb drains.	
Response Phase	<u>Description Of Actions</u> <ul style="list-style-type: none"> <li>FIC assesses spill for threat to human health and environment, monitors response, and makes required notifications.</li> <li>If spill overflows catchment, take actions to contain and recover at the lagoon using available equipment.</li> </ul>	ERAP, Tab B Table ERAP B.1  ERAP, Tab F Tables ERAP F.1-F.11  FRP, Tab 4 Table FRP 4.4
	<u>Potential Problems and Recommended Corrective Actions</u> <ul style="list-style-type: none"> <li>None foreseen.</li> </ul>	
Cleanup Phase	<u>Description of Actions</u>  Facility Response Team completes spill recovery and cleanup.	ERAP, Tab H  FRP, Tab 6, Section 6.3
	<u>Potential Problems and Recommended Corrective Actions</u>  None foreseen.	

<b>Table FRP 6.10</b> <b>Implementation of Response Actions for a Small Discharge</b> <b>In-plant Piping and Other Transfer Equipment</b>		
Phase	Description of Implementation Actions	Plan Section
Emergency Phase	<u>Description of Actions</u> <ul style="list-style-type: none"> <li>Upon detecting discharge, the operator takes immediate actions to stop transfer operations and cease any pumping by closing off all valves to pipelines; secure system and ignition sources and contain spill.</li> <li>Operator makes required notifications to terminal office using radios; office personnel will make correct notifications.</li> </ul>	ERAP, Tab D Table D.7  FRP, Tab 4 Table FRP 4.4  ERAP, Tab B Table ERAP B.1
	<u>Potential Problems and Recommended Corrective Actions</u>  Spills outside of containment can contaminate soil and enter drainage ditches, depending on location of the source of spill. NAS personnel must stop and contain spill at the earliest opportunity and be prepared to conduct further containment and recovery at drainage ditches and storm water drains.	
Response Phase	<u>Description of Actions</u> <ul style="list-style-type: none"> <li>FIC assesses spill for threat to human health and environment, flow pathways and receptors, monitors response, and makes required notifications.</li> <li>If spill reaches drainage ditches or drains away from area take actions to contain and recover at the storm water drains using available equipment.</li> </ul>	ERAP, Tab B Table ERAP B.1  ERAP, Tab F Tables ERAP F.1-F.11  ERAP, Tabs G & I  FRP, Tab 4 Table FRP 4.5
	<u>Potential Problems and Recommended Corrective Actions</u>  None foreseen.	
Cleanup Phase	<u>Description of Actions</u>  Facility Response Team completes spill recovery and cleanup.	ERAP, Tab H  FRP, Tab 6, Section 6.3
	<u>Potential Problems and Recommended Corrective Actions</u>  None foreseen.	

<p align="center"><b>Table FRP 6.11</b>  <b>Implementation of Response Actions for a Small Discharge</b>  <b>Bulk Oil Storage and Associated Equipment Within Dike Basins</b></p>		
<b>Phase</b>	<b>Description of Implementation Actions</b>	<b>Plan Section</b>
Emergency Phase	<u>Description of Actions</u> <ul style="list-style-type: none"> <li>Upon detecting discharge, the operator takes immediate actions to stop transfer operations; shut down loading pumps during transfers; close all dike valves; secure all systems and ignition sources and if possible, isolate/contain spill.</li> <li>Operator makes required notifications to terminal office using radios; office personnel will make correct notifications.</li> </ul>	ERAP, Tab D, Table ERAP D.15  FRP, Tab 4 Table FRP 4.5
	<u>Potential Problems and Recommended Corrective Actions</u>  Since the dike basin floors are not impervious, the spill must be recovered quickly to minimize groundwater contamination.	
Response Phase	<u>Description of Actions</u>  FIC assesses spill for threat to human health and environment, monitors response, and makes required notifications.	ERAP, Tab B Table ERAP B.1  ERAP, Tab F Tables ERAP F.1-F.11  ERAP, Tab I  FRP, Tab 4 Table FRP 4.6
	<u>Potential Problems and Recommended Corrective Actions</u>  None foreseen.	
Cleanup Phase	<u>Description of Actions</u>  Facility Response Team completes spill recovery and cleanup.	ERAP, Tab H  FRP, Tab 6 Section 6.3
	<u>Potential Problems and Recommended Corrective Actions</u>  None foreseen.	

<b>Table FRP 6.12</b> <b>Implementation of Response Actions for a Medium Discharge</b> <b>In-plant Piping and Other Transfer Equipment</b>		
<b>Phase</b>	<b>Description of Implementation Actions</b>	<b>Plan Section</b>
Emergency Phase	<u>Description Of Actions</u> <ul style="list-style-type: none"> <li>Upon detecting discharge, the operator takes immediate actions to stop transfer operations and cease any pumping by closing off all valves to pipelines; secure system and ignition sources and isolate/contain spill if possible.</li> <li>Operator makes required notifications to terminal office using radios; office personnel will make correct notifications.</li> <li>FIC notifies NRC and response organization to respond to spill as required and takes further actions to control the release.</li> </ul>	ERAP, Tab D Tables ERAP D.7 & D.8  ERAP, Tabs A, B, C & E  FRP, Tab 4 Table FRP 4.7
	<u>Potential Problems and Recommended Corrective Actions</u>  Spills outside of containment can contaminate soil and enter drainage ditches, depending on location of the source of spill. NAS personnel must stop and contain spill at the earliest opportunity and be prepared to conduct further containment and recovery at storm drains and drainage ditches if necessary.	
Response Phase	<u>Description of Actions</u> <ul style="list-style-type: none"> <li>FIC assesses spill for threat to human health and environment, flow pathways and receptors, monitor response, and makes required notifications.</li> <li>If spill reaches the drainage ditches, takes actions to contain and recover at the ditches using available equipment.</li> <li>If spill flows off terminal, FIC evaluates threats and implements protection strategies and initiates Natural Resource Damage Assessment (NRDA) process.</li> <li>Spill management team organizes and manages response as required.</li> <li>Develop site-specific safety plans using FRP template</li> </ul>	ERAP, Tab B & E  ERAP, Tab F Tables ERAP F.1-F.11  ERAP, Tab G  ERAP, Tab I  FRP, Tab 3 Section 3.1  FRP, Tabs 10, 11 & 13  FRP, Tab 4 Table FRP 4.11
	<u>Potential Problems and Recommended Corrective Actions</u> <ul style="list-style-type: none"> <li>None foreseen.</li> </ul>	
Cleanup Phase	<u>Description Of Actions</u> <ul style="list-style-type: none"> <li>Facility Response Team completes spill recovery and cleanup.</li> <li>NRDA</li> </ul>	ERAP, Tab H  FRP, Tab 6, Section 6.3  FRP, Tab 13
	<u>Potential Problems and Recommended Corrective Actions</u> <ul style="list-style-type: none"> <li>None foreseen.</li> </ul>	

<b>Table FRP 6.13</b> <b>Implementation of Response Actions for a Medium Discharge</b> <b>Bulk Oil Tanks and Associated Equipment with Dike Basins</b>		
<b>Phase</b>	<b>Description of Implementation Actions</b>	<b>Plan Section</b>
Emergency Phase	<u>Description of Actions</u> <ul style="list-style-type: none"> <li>Upon detecting discharge, the operator takes immediate actions to stop transfer operations; shut down loading pumps during transfers; close all dike valves; secure all systems and ignition sources and if possible, isolate/contain spill.</li> <li>Operator makes required notifications to terminal office using radios; office personnel will make correct notifications.</li> <li>Takes further actions to control release.</li> </ul>	ERAP, Tab D Table ERAP D.8  ERAP, Tabs A, B, C & E  FRP, Tab 4 Table FRP 4.8
	<u>Potential Problems and Recommended Corrective Actions</u> <ul style="list-style-type: none"> <li>Since the dike basin floors are not impervious, the spill must be recovered quickly to minimize ground and groundwater contamination.</li> <li>FIC notifies spill response organization to respond to spill as required and takes further actions to control release.</li> </ul>	
Response Phase	<u>Description of Actions</u>  FIC assesses spill for threat to human health and environment, flow pathways and receptors, monitor response, and makes required notifications.	ERAP, Tab B Table ERAP B.1  ERAP, Tab F Tables ERAP F.1-F.9  ERAP, Tab G  FRP, Tab 3
	<u>Potential Problems and Recommended Corrective Actions</u> <ul style="list-style-type: none"> <li>None foreseen.</li> </ul>	
Cleanup Phase	<u>Description of Actions</u>  Facility Response Team completes spill recovery and cleanup.	ERAP, Tab H  FRP, Tab 6, Section 6.3
	<u>Potential Problems and Recommended Corrective Actions</u> <ul style="list-style-type: none"> <li>None foreseen.</li> </ul>	

<b>Table FRP 6.14</b> <b>Implementation of Response Actions for a Worst-case Discharge</b> <b>In-plant Equipment and Associated Equipment</b>		
Phase	Description of Implementation Actions	Plan Section
Emergency Phase	<u>Description of Actions</u> <ul style="list-style-type: none"> <li>Upon detecting discharge, the operator takes immediate actions to stop transfer operations and cease any pumping by closing off all valves to pipelines; secure system and ignition sources and isolate/contain spill if possible.</li> <li>Operator makes required notifications to terminal office using radios; office personnel will make correct notifications.</li> <li>FIC notifies NRC and response organization to respond to spill as required and takes further actions to control the release.</li> <li>FIC activates evacuation plan if necessary.</li> <li>Facility response and management teams initiate emergency actions.</li> </ul>	ERAP, Tab D Tables ERAP D.1-D.8  FRP, Tab 4, Table FRP 4.10  ERAP Tabs A, B, C, E, F & I
	<u>Potential Problems and Recommended Corrective Actions</u>  Such a spill will contaminate soil and most likely enter drainage ditches and storm drains located near the facility grounds; Could also contaminate ground water and eventually OSO or Corpus Christi Bay depending on the circumstances and source of the catastrophic spill.	
Response Phase	<u>Description of Actions</u> <ul style="list-style-type: none"> <li>ICS forms, assesses and manages response; establishes communication system.</li> <li>Develop site specific safety plans using FRP template.</li> <li>Mobilize and deploy response resources.</li> <li>Evaluate threats and implements protection strategies and initiates NRDA process.</li> </ul>	ERAP, Tabs E, F, G, & I  FRP, Tabs 3, 10, 11 & 13
	<u>Potential Problems and Recommended Corrective Actions</u> <ul style="list-style-type: none"> <li>None foreseen.</li> </ul>	
Cleanup Phase	<u>Description of Actions</u> <ul style="list-style-type: none"> <li>Facility Response Team completes spill recovery and cleanup.</li> <li>NRDA</li> </ul>	ERAP, Tab H  FRP, Tab 6, Section 6.3  FRP, Tab 13
	<u>Potential Problems and Recommended Corrective Actions</u> <ul style="list-style-type: none"> <li>None foreseen.</li> </ul>	

<b>Table FRP 6.15</b> <b>Implementation of Response Actions for a Worst-case Discharge</b> <b>Bulk Oil Tanks and Associated Equipment with Dike Basins</b>		
<b>Phase</b>	<b>Description of Implementation Actions</b>	<b>Plan Section</b>
Emergency Phase	<u>Description of Actions</u> <ul style="list-style-type: none"> <li>Upon detecting discharge, the operator takes immediate actions to stop transfer operations by stop pumping; close all dike valves; secure all systems and ignition sources and if possible; isolate/contain spill.</li> <li>Operator makes required notifications to terminal office using radios; office personnel will make correct notifications.</li> <li>FIC notifies NRC and response organization to respond to spill.</li> <li>FIC activates evacuation plan, if necessary.</li> <li>Facility response and management teams initiate emergency actions.</li> </ul>	ERAP, Tab D Tables ERAP D.1-D.9  FRP, Tab 4, Table FRP 4.11  ERAP Tabs A, B, C, E, F & I
	<u>Potential Problems and Recommended Corrective Actions</u>  Such a spill will contaminate soil and most likely enter drainage ditches and reach OSO or Corpus Christi Bay depending on the tide and circumstances of the spill.	
Response Phase	<u>Description of Actions</u> <ul style="list-style-type: none"> <li>FIC assesses spill for threat to human health and environment, flow pathways and receptors, monitor response, and makes required notifications.</li> <li>ICS forms, assess and manages response; establishes communication system.</li> <li>Develop site specific safety plans using FRP template.</li> <li>Mobilize and deploy response resources.</li> <li>Evaluate threats and implements protection strategies and initiates NRDA process.</li> </ul>	ERAP, Tabs E, F, G & I  FRP, Tabs 3, 10, 11 & 13
	<u>Potential Problems and Recommended Corrective Actions</u> <ul style="list-style-type: none"> <li>None foreseen.</li> </ul>	
Cleanup Phase	<u>Description of Actions</u> <ul style="list-style-type: none"> <li>Facility Response Team completes spill recovery and cleanup.</li> <li>NRDA</li> </ul>	ERAP, Tab H  FRP, Tab 6, Section 6.3  FRP, Tab 3 & 13
	<u>Potential Problems and Recommended Corrective Actions</u> <ul style="list-style-type: none"> <li>None foreseen.</li> </ul>	

<b>Table FRP 6.16</b> <b>Cleanup Expediting Steps</b>	
<b>Topic</b>	<b>Discussion</b>
Other Existing Emergency Plans for Spill Response	NAS Corpus Christi under Chief of Naval Air Training (CNTRA) who is the NOSC. The NOSC should be contacted for accessing additional resources identified in this FRP.
Access to Additional Contracted Help	Through the NOSC and Basic Ordering Agreements (BOAs).
Access to Additional Equipment/Experts	Through the NOSC.
Additional Training Planned (Through Drills, etc.)	To be determined.
Ability to Implement Plan	All declared resources, both personnel and equipment, are available for the implementation of this plan. Training and drills described in this FRP will maintain response readiness and expedite a response to an actual spill event.

### 6.3 Disposal Plan

The types of waste expected from a spill response are:

- Fresh oil, oily wastes, and weathered oil
- Oil and water emulsions
- Oil-contaminated wastes such as:
  - Spent sorbents
  - Oil-contaminated debris and materials such as disposable of PPE, rags, plastic bags or sheets, etc.
  - Oiled vegetation, soil, and sand if onshore cleanup operations occurs in the response
  - Oil-contaminated wildlife carcasses
  - Waste decontamination solutions and effluent from equipment decontamination operations
  - Noncontaminated wastes from response operations

Use the tables in this FRP outline to identify the potential waste generated in a spill response; requirements and procedures to recover, reuse, decontaminate or properly dispose of these materials; and account for any regulatory or disposal facility requirements. The disposal plan in the FRP should comply and be compatible with the facility's procedures and policies for the management of nonhazardous and hazardous wastes.

Table FRP 6.17 Temporary Storage Equipment for Collected Oil and Response Waste		
Equipment	Capacity	Location/POC/Telephone
<b>Bulk Storage Equipment for Recovered Oil</b>		
(As listed in Tables 6.1 to 6.3)	(As listed in Tables 6.1 to 6.3)	Point of contact for all equipment: Corpus Christi Area Oil Spill Control Association (512) 882-2656
<b>Storage Equipment for Contaminated Wastes</b>		
	See ERAP, Tab H, Table ERAP H.3	CCAD (512) 939-2326  Defense Logistics Agency (DLA) (512) 939-4122  Defense Reutilization and Marketing Office (DRMO) (512) 939-2933
<b>Storage Equipment for Hazardous Wastes</b>		
	See Listing under Contaminated Wastes	See listing under Equipment for Contaminated Wastes
<b>Storage Equipment for Other Response Wastes And Debris</b>		
	See Listing under Contaminated Wastes	See listing under Equipment for Contaminated Wastes

**Note:** It is helpful to coordinate Material Classification and Disposal Strategy with Corpus Christi Area Oil Spill Control Association.

Table FRP 6.18 Material Classification and Disposal Strategy			
Material	Classification	Disposal Strategy	Disposal Facility
Recovered Oil	Recoverable	NA	
	Nonhazardous Waste	NA	
	Hazardous Waste	NA	
Oil-Contaminated Wastes	Nonhazardous Waste	NA	
	Hazardous Waste	NA	
Contaminated Soil	Nonhazardous	NA	
	Hazardous	NA	
Contaminated Equipment	Nonhazardous	NA	
	Hazardous	NA	
Waste Chemicals To Include DECON Solutions	Nonhazardous Waste	NA	
	Hazardous Waste	NA	
Dead Wildlife	Protected	Dead Federally endangered/threatened species will be turned over to the USFWS	NA
	Other	See above	NA
Personal Protective Equipment	Nonhazardous	NA	
	Hazardous	NA	
Adsorbents	Nonhazardous	NA	
	Hazardous	NA	
Other Response Wastes	Nonhazardous Waste	NA	
	Hazardous Waste	NA	

Table FRP 6.19 Disposal Strategy, Disposal Criteria, and Conditions			
Disposal Strategy	Disposal Facility/Location/POC/Telephone	Conditions and Criteria for Acceptance and Disposal	RCRA Permit/Manifest
Follow the DoD 4160.21-M Hazardous Property Management Instruction.			

**Note:** It is helpful to coordinate Material Classification and Disposal Strategy with Corpus Christi Area Oil Spill Control Association.

<b>Table FRP 6.20</b> <b>Disposal Plan Standard Operating Procedures</b>	
<b>Material</b>	<b>Procedures</b>
Recovered Oil	NA
Oil-Contaminated Wastes	NA
Contaminated Soil	NA
Contaminated Equipment	NA
Waste Chemicals and DECON Solutions	NA
Personal Protective Equipment	NA
Adsorbents	NA
Dead Wildlife	Dead Federally endangered/threatened species will be turned over to the USFWS
Other Response Wastes	NA
<b>CAUTION</b>  <b>DO NOT MIX NONHAZARDOUS WASTES WITH HAZARDOUS WASTES OR MATERIALS</b>  <b>MINIMIZE HAZARDOUS WASTES GENERATED</b>	

**Note:** It is helpful to coordinate with Corpus Christi Area Oil Spill Control Association to develop the various Disposal Plan Standards listed above.

#### **6.4 Containment and Drainage Planning**

**Note:** Never release trapped oil from secondary containment into a drainage system. Remove spilled oil from a secondary containment area by pumping it out with vacuum trucks or by using portable hose and pumps to pump to undamaged tanks or containers.

Once oil is trapped, do not release it to a drainage system. Drainage system control devices such as oil/water separators are designed to handle only small amounts of oil in the water being drained.

See the figures in FRP, Tab 18 for the various drainage routes on NAS Corpus Christi.

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**TAB 7 — SELF-INSPECTION**

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7.3 Response Equipment Inspections . . . . . FRP: TAB 7-2

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Table FRP 7.2 Tank Inspection Log . . . . . FRP: TAB 7-3

Table FRP 7.3 Secondary Containment Inspection Record (Checklist) . . . . . FRP: TAB 7-4

Table FRP 7.4 Secondary Containment Inspection Log . . . . . FRP: TAB 7-5

Table FRP 7.5 Response Equipment Inspection Checklist and Log . . . . . FRP: TAB 7-6

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## **TAB 7 — SELF-INSPECTION**

### **7.0 SELF-INSPECTION**

**Note:** The EPA regulation requires three things under this section:

- A checklist of things to inspect,
- A method of recording the actual inspection and findings, and
- A cross-reference of the inspection and record-keeping procedures mandated in the SPCC plan.

Under 1.8.1 of the EPA regulation, inspection procedures need not include tanks and secondary containment, if appropriate checklists and records are maintained with the SPCC plan, and appropriately referenced in the response plan. However, facilities that have inadequate SPCC plans should either update their plans to incorporate the OPA 90 self-inspection procedures or incorporate them within the FRP. The latter is preferred since prevention data within a response plan will only make the plan more bulky and contribute little or nothing to the overall response effort during an emergency.

Response equipment inspection procedures must be addressed in the facility response plan. Only the actual facility response equipment inspection checklist forms need be included in the facility response plan. The completed inspection logs should be maintained with the ER A P at the individual facilities (fuel farm, CCAD, etc) where the inspections take place. Inspection logs must be maintained for five years.

The following sample format is suggested to meet the EPA Self-Inspection requirement for response equipment. A checklist should be developed for each major piece/type of response equipment located at the facility (skimmers, vessels, boom, pumps, etc). Per USCG requirements, equipment must be maintained in good condition and inspected and maintained in accordance with the manufacturer's recommendations.

Currently, the NAS Corpus Christi SPCC plans do not specifically address the facility self-inspection requirements established in the EPA OPA regulation. Therefore, the self-inspection requirements, to include the inspection of response equipment, will be established in this response plan. Use the tables shown in this tab to conduct and document inspections. Personnel responsible for performing these inspections and maintaining records of the inspections are described in the SPCC plans. All inspection records will be maintained for five years. The inspection of response equipment listed in this response plan is a new requirement under the EPA and USCG OPA' 90 implementing regulations.

#### **7.1 Oil Storage Tank Inspection**

Use the Tank Inspection Record (Checklist) form, Table FRP 7.1, to perform and document tank inspections. Use the Tank Inspection Log, Table FRP 7.2, to record and serve as the summary of the inspections.

#### **7.2 Secondary Containment Inspections**

Use the Secondary Containment Inspection Record (Checklist) form, Table FRP 7.3, to perform and document containment area inspections. Secondary containment inspections should be normally done at the same time as the tank inspections. Use the Secondary Containment Inspection Log, Table FRP 7.4, to record and serve as the summary of the inspections.

### 7.3 Response Equipment Inspections

<b>Table FRP 7.1 Tank Inspection Record (Checklist)</b>	
<div style="border: 1px solid black; height: 30px; margin-bottom: 10px; padding: 5px;">FACILITY:</div> <div style="border: 1px solid black; height: 30px; margin-bottom: 10px; padding: 5px;">TANK/SET:</div>	
<b>INSPECT TANK (CHECK BOX OF ANY LEAK INDICATION):</b>	
<input type="checkbox"/> DRIP MARKS	<input type="checkbox"/> CORROSION
<input type="checkbox"/> DISCOLORATION OF TANKS	<input type="checkbox"/> CRACKS
<input type="checkbox"/> PUDDLES OF STORED MATERIAL	<input type="checkbox"/> LOCALIZED DEAD VEGETATION
<b>INSPECT FOUNDATION (CHECK BOX OF ANY DEFICIENCY):</b>	
<input type="checkbox"/> CRACKS	<input type="checkbox"/> SETTLING
<input type="checkbox"/> DISCOLORATION	<input type="checkbox"/> GAPS BETWEEN TANK AND FOUNDATION
<input type="checkbox"/> PUDDLES OF STORED MATERIAL	<input type="checkbox"/> DAMAGE CAUSED BY VEGETATION ROOTS
<b>INSPECT PIPING (CHECK BOX OF ANY LEAK INDICATOR OR DEFICIENCY):</b>	
<input type="checkbox"/> DROPLETS OF STORED MATERIAL	<input type="checkbox"/> BOWING OF PIPE BETWEEN SUPPORTS
<input type="checkbox"/> DISCOLORATION	<input type="checkbox"/> SEEPAGE FROM VALVES OR SEALS
<input type="checkbox"/> CORROSION	<input type="checkbox"/> LOCALIZED DEAD VEGETATION
Source: 40 CFR 112 Appendix G (subsection 1.8.1.1)	
Comments:	

Use the Response Equipment Inspection Checklist and Log, Table FRP 7.5, to perform and document response equipment inspections.

[illegible]

**JULY 1996**  
**NAS CORPUS CHRISTI**

**Table FRP 7.3.  
Secondary Containment Inspection Record (Checklist)**

FACILITY:

TANK/SET/AREA:

**INSPECT DIKE/BERM SYSTEM (CHECK BOX OF ANY DEFICIENCY):**

- |                                                 |                                                                   |
|-------------------------------------------------|-------------------------------------------------------------------|
| <input type="checkbox"/> LEVEL OF PRECIPITATION | <input type="checkbox"/> EROSION                                  |
| <input type="checkbox"/> AVAILABLE CAPACITY     | <input type="checkbox"/> PERMEABILITY OF EARTHEN FLOOR            |
| <input type="checkbox"/> PERMEABILITY           | <input type="checkbox"/> LOCATION/STATUS OF PIPES/INLETS/DRAINAGE |
| <input type="checkbox"/> DEBRIS                 |                                                                   |

**INSPECT SECONDARY CONTAINMENT (CHECK BOX OF ANY DEFICIENCY):**

- |                                                     |                                           |
|-----------------------------------------------------|-------------------------------------------|
| <input type="checkbox"/> CRACKS                     | <input type="checkbox"/> CORROSION        |
| <input type="checkbox"/> DISCOLORATION              | <input type="checkbox"/> VALVE CONDITIONS |
| <input type="checkbox"/> PUDDLES OF STORED MATERIAL |                                           |

**INSPECT RETENTION AND DRAINAGE PONDS (CHECK BOX OF ANY DEFICIENCY):**

- |                                                     |                                              |
|-----------------------------------------------------|----------------------------------------------|
| <input type="checkbox"/> EROSION                    | <input type="checkbox"/> DEBRIS              |
| <input type="checkbox"/> AVAILABLE CAPACITY         | <input type="checkbox"/> STRESSED VEGETATION |
| <input type="checkbox"/> PUDDLES OF STORED MATERIAL |                                              |

Source: 40 CFR 112 Appendix G (subsection 1.8.1.3)

Comments:

[illegible]

**Table FRP 7.5**  
**Response Equipment Inspection Checklist and Log**

Inventory Item	
Quantity on-Hand:	
Short-fall from Plan Quantity:	<input type="checkbox"/> YES <input type="checkbox"/> NO
Storage Location:	
Accessibility: [Time to Access and Respond]	
Operational Status:	<input type="checkbox"/> Operational <input type="checkbox"/> Nonoperational
Condition:	<input type="checkbox"/> Good <input type="checkbox"/> Fair <input type="checkbox"/> Poor
Use Status:	Date of Last Use: Date of Last Test: Test Frequency:
Required Inspection Frequency:	
Shelf Life:	Present age: Expected Replacement Date: Date Fuel Last Changes:
Comments:	
Inspector:	Name:
	Rank/Rate/Code
Signature:	Date of Inspection:

## **TAB 8 — TRAINING, DRILLS, AND EXERCISES**

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## **TAB 8 — TRAINING, DRILLS, AND EXERCISES**

### **8.0 TRAINING PROCEDURES**

The USCG has developed a set of voluntary training guidelines for oil pollution responders (guidelines for hazardous substance responders have not been developed). The guidelines contain the recommended training subject areas for personnel involved in oil spill response and cleanup. The training is divided into two categories, one for nonsupervisory operation personnel and the other for supervisory operational personnel.

The intent of the training guidelines are for professional trainers (NAS Corpus Christi personnel or private contractors) to use the USCG guidelines to develop specific lesson plans on the subject areas listed in the knowledge column of the guidelines.

In addition to the CG requirements, the Occupational Safety and Health Administration (OSHA) has promulgated training requirements in 29 CFR 1910.120 that fully apply to oil spill cleanup operations.

#### **8.1 Position-specific Training Requirements**

The USCG guidelines must be combined with the job description for each response person to determine what training is needed for that person to carry out his/her duties. The following tables are examples of the type of training that will be needed by NAS Corpus Christi response personnel.

<b>Table FRP 8.1</b> <b>Position: Incident Commander &amp; Deputy Incident Commander</b>		
<b>Task Description</b>	<b>Have Knowledge In</b>	<b>Skill</b>
Notify appropriate authorities and alert key personnel according to response plan.	<ul style="list-style-type: none"> <li>• Facility plan</li> <li>• Notification of authorities</li> <li>• Cleanup resources</li> <li>• How and when to mobilize resources</li> </ul>	Demonstrate practical activation of plan.
Initiate response	<ul style="list-style-type: none"> <li>• Baseline survey techniques and requirements</li> <li>• Contracting procedures</li> <li>• Salvage/mitigation</li> <li>• Liability issues</li> <li>• Equipment uses and limitations</li> <li>• Funding sources</li> <li>• Natural resource damage assessment</li> <li>• Statutory/regulatory requirements</li> </ul>	Identify and coordinate immediate response activities.
Assess size, product, source, and magnitude of spill.	<ul style="list-style-type: none"> <li>• Metric/US conversions</li> <li>• Estimating spill volumes</li> <li>• Physical oil types and American Petroleum Institute (API) ratings</li> <li>• Basic physical chemistry of oil and petroleum products</li> </ul>	<p>Estimate spill sizes.</p> <p>Determine spill source.</p> <p>Convert metric units to US units.</p> <p>Assess potential political/economic, social significance of a spill.</p> <p>Identify spilled product.</p>
Hazard recognition	<ul style="list-style-type: none"> <li>• Material Safety Data Sheets (MSDS)</li> <li>• Basic toxicology</li> <li>• Fire and explosion hazards</li> <li>• Physical hazards, such as: <ul style="list-style-type: none"> <li>— Slip, trip, fall</li> <li>— Heat stress</li> <li>— Vehicular hazards</li> </ul> </li> <li>• Sampling instruments and techniques</li> <li>• Site characterization and analysis</li> <li>• Boom deployment</li> <li>• Small boat operations</li> <li>• Skimmer operations</li> <li>• Vacuum truck operations</li> </ul>	<p>Identify accident potential.</p> <p>Identify potential threat to personnel and the environment.</p>
Identify and prioritize resources at risk.	<ul style="list-style-type: none"> <li>• Shoreline types</li> <li>• Relative sensitivity of coastal types</li> <li>• Sensitivity mapping</li> <li>• Local geography</li> <li>• Local oceanography</li> <li>• Local infrastructure</li> </ul>	<p>Identify protection priorities.</p> <p>Identify cleanup priorities.</p>
Spill trajectory forecasting	<ul style="list-style-type: none"> <li>• Influence of sea and weather conditions on oil, properties and slick behavior/spread rate</li> <li>• Estimating spill size</li> <li>• Trajectory model interpretation</li> </ul>	Use data to predict speed and direction of oil movement.
Assess potential for recontamination	<ul style="list-style-type: none"> <li>• Location of remaining oil in the environment or in the source</li> <li>• Trajectory modeling</li> <li>• Final survey techniques</li> </ul>	<p>Use spill projection models.</p> <p>Determine whether cleanup should be continued or terminated.</p>

<b>Table FRP 8.1</b> <b>Position: Incident Commander &amp; Deputy Incident Commander</b>		
<b>Task Description</b>	<b>Have Knowledge In</b>	<b>Skill</b>
Establish command post.	<ul style="list-style-type: none"> <li>• Site selection consideration: <ul style="list-style-type: none"> <li>— Infrastructure</li> <li>— Logistics concerns</li> <li>— Future expansion</li> </ul> </li> </ul>	Select appropriate command post site.  Provide for logistics.
Management of operational response activities	<ul style="list-style-type: none"> <li>• Use and limitations of pollution control equipment/techniques</li> <li>• Logistics concerns <ul style="list-style-type: none"> <li>— Personnel</li> <li>— Equipment</li> <li>— Infrastructure</li> </ul> </li> </ul>	Direct and supervise: <ul style="list-style-type: none"> <li>• Securing source</li> <li>• Chemical/biological treatment methods</li> </ul>
Conduct briefings.	<ul style="list-style-type: none"> <li>• Briefing techniques</li> </ul>	Conduct briefings for: <ul style="list-style-type: none"> <li>• Senior officers</li> <li>• Subordinates</li> <li>• Community</li> <li>• Media</li> </ul>
Conduct analysis, with appropriate agencies, to determine if response should be continued, suspended, or terminated.	<ul style="list-style-type: none"> <li>• Effort/benefit analysis <div> <div><u>Effort:</u></div> <div>manpower, equipment, and time requirements, environmental damage, area use interference</div> </div> <div> <div><u>Benefits:</u></div> <div>aesthetic benefits, environmental, economical, social, water use benefits, address public pressures/concerns</div> </div> </li> </ul>	Rank the different criteria.  Use effort/benefit analysis method.
Personnel management	<ul style="list-style-type: none"> <li>• Team leadership</li> <li>• Time management</li> <li>• Stress management</li> <li>• Delegations methods</li> </ul>	Identify/define/assign tasks and expectations.  Monitor results.
Conduct review of the response.	<ul style="list-style-type: none"> <li>• Review response activities.</li> </ul>	Conduct an effective and productive team review of response.
Make recommendations for improved preparedness.	<ul style="list-style-type: none"> <li>• Familiarity with existing contingency plan</li> </ul>	Demonstrate the ability to make pertinent recommendations for improvements to the contingency plan.  Demonstrate analytical skills.

<b>Table FRP 8.2</b> <b>Position: Operations Section Chief</b>		
<b>Task Description</b>	<b>Have Knowledge In</b>	<b>Skill</b>
Prepare incident reports.	<ul style="list-style-type: none"> <li>• Preparing standard spill reporting forms</li> </ul>	
Gather and verify information.	<ul style="list-style-type: none"> <li>• Operation and construction of various pollution sources, such as:               <ul style="list-style-type: none"> <li>— Vessels</li> <li>— Pipelines</li> <li>— Storage tanks</li> <li>— Truck fill rack</li> <li>— Railcar fill stands</li> </ul> </li> <li>• Using chart and tide tables</li> <li>• Plotting skills</li> <li>• Basic meteorology</li> <li>• Local sensitivities               <ul style="list-style-type: none"> <li>— economic</li> <li>— social</li> <li>— environmental</li> </ul> </li> </ul>	Demonstrate ability to gather supporting data to initiate an appropriate response.
Assess size, product, source, and magnitude of spill.	<ul style="list-style-type: none"> <li>• Metric/US conversions</li> <li>• Estimating spill volumes</li> <li>• Physical oil types and API ratings</li> <li>• Basic physical chemistry of oil and petroleum products</li> </ul>	<p>Estimate spill sizes.</p> <p>Determine spill source.</p> <p>Convert metric units to US units.</p> <p>Assess potential political/economic, social significance of a spill.</p> <p>Identify spilled product.</p>
Hazard recognition	<ul style="list-style-type: none"> <li>• MSDS</li> <li>• Basic toxicology</li> <li>• Fire and explosion hazards</li> <li>• Physical hazards, such as:               <ul style="list-style-type: none"> <li>— Slip, trip, fall</li> <li>— Heat stress</li> <li>— Vehicular hazards</li> </ul> </li> <li>• Sampling instruments and techniques</li> <li>• Site characterization and analysis</li> <li>• Boom deployment</li> <li>• Small boat operations</li> <li>• Skimmer operations</li> <li>• Vacuum truck operations</li> </ul>	<p>Identify threat to personnel and the environment.</p> <p>Identify accident potential.</p>
Identify and prioritize resources at risk.	<ul style="list-style-type: none"> <li>• Shoreline types</li> <li>• Relative sensitivity of coastal types</li> <li>• Sensitivity mapping</li> <li>• Local geography</li> <li>• Local oceanography</li> <li>• Local infrastructure</li> </ul>	<p>Identify protection priorities.</p> <p>Identify cleanup priorities.</p>
Spill trajectory forecasting	<ul style="list-style-type: none"> <li>• Influence of sea and weather conditions on oil, properties and slick behavior/spread rate</li> <li>• Estimating spill size</li> <li>• Trajectory model interpretation</li> </ul>	Use data to predict speed and direction of oil movement.

<b>Table FRP 8.2</b> <b>Position: Operations Section Chief</b>		
<b>Task Description</b>	<b>Have Knowledge In</b>	<b>Skill</b>
Identify resources required to respond	<ul style="list-style-type: none"> <li>• Use and limitations of:               <ul style="list-style-type: none"> <li>— Dispersants</li> <li>— Tracking systems</li> <li>— Booms</li> <li>— Skimmers</li> <li>— Pumps</li> <li>— Portable storage</li> <li>— Chemical barriers</li> <li>— Sorbents</li> <li>— Bioremediation</li> <li>— Communications equipment</li> <li>— Shoreline cleanup equipment</li> <li>— In-situ burning</li> </ul> </li> </ul>	<p>Selection of proper equipment for the given circumstances.</p> <p>Determine personnel resources needed.</p> <p>Determine surveillance requirements.</p>
Conduct briefings.	<ul style="list-style-type: none"> <li>• Briefing techniques</li> </ul>	<p>Conduct briefings for:</p> <ul style="list-style-type: none"> <li>• Incident commander/command staff</li> <li>• Subordinates</li> <li>• Community</li> <li>• Media</li> </ul>
Define operations team command structure.	<ul style="list-style-type: none"> <li>• Typical spill response organization.               <ul style="list-style-type: none"> <li>— Depending on the scale of the response (minor, medium, major)</li> </ul> </li> <li>• Typical spill response command structure</li> <li>• Roles and responsibilities of team members</li> </ul>	<p>Organize response structure.</p> <p>Delegate responsibilities.</p>
Management of operational response activities	<ul style="list-style-type: none"> <li>• Use and limitations of pollution control equipment/techniques</li> <li>• Logistics concerns               <ul style="list-style-type: none"> <li>— Personnel</li> <li>— Equipment</li> <li>— Infrastructure</li> </ul> </li> </ul>	<p>Direct and supervise:</p> <ul style="list-style-type: none"> <li>• Securing source</li> <li>• Chemical/biological treatment methods</li> </ul>
Assess potential for recontamination.	<ul style="list-style-type: none"> <li>• Location of remaining oil in the environment or in the source</li> <li>• Trajectory modeling</li> <li>• Final survey technique</li> </ul>	<p>Use spill projection models.</p> <p>Determine whether cleanup should be continued or terminated.</p>
Shut down field operations	<ul style="list-style-type: none"> <li>• Updated inventory and location of equipment and personnel</li> <li>• Procedures to terminate operations</li> </ul>	<p>Describe how the operations should be terminated in an orderly manner.</p>
Provide information, documentation, and evidence to final operations report.	<ul style="list-style-type: none"> <li>• Daily report/chronological report</li> <li>• Maps, charts, or diagrams</li> <li>• Message traffic, telex, radio logs, fax</li> <li>• Shoreline survey evaluation form</li> <li>• Photographic documentation</li> </ul>	<p>Conduct an effective and productive team review of response.</p>
Personnel management	<ul style="list-style-type: none"> <li>• Team leadership</li> <li>• Time management</li> <li>• Stress management</li> <li>• Delegations methods</li> </ul>	<p>Identify/define/assign tasks and expectations.</p> <p>Monitor results.</p>
Make recommendations for improved preparedness.	<ul style="list-style-type: none"> <li>• Familiarity with existing contingency plan</li> </ul>	<p>Demonstrate the ability to make pertinent recommendations for improvements to the contingency plan.</p> <p>Demonstrate analytical skills.</p>

<b>Table FRP 8.3</b> <b>Position: Recovery/Protection Unit Leader and Team Member</b>		
<b>Task Description</b>	<b>Have Knowledge In</b>	<b>Skill</b>
Resource Protection	<ul style="list-style-type: none"> <li>• Deploy deflection and/or containment boom</li> <li>• Deploy sorbent materials</li> <li>• Construct dikes and/or dams</li> <li>• Report on the effectiveness of booming/diking arrangements</li> <li>• Identify protection resource needs, such as:               <ul style="list-style-type: none"> <li>— Boom types</li> <li>— Boom lengths</li> <li>— Mooring systems</li> <li>— Anchor buoy and lights</li> <li>— Vessel support equipment</li> </ul> </li> </ul>	Boom deployment  Onshore recovery and containment techniques
Assist in initial assessment of spill and potential impacts.	<ul style="list-style-type: none"> <li>• Type and volume of spill sources</li> <li>• General description of causes of spills</li> <li>• Spill volume determination</li> <li>• Oil types</li> <li>• Proximity to shoreline</li> <li>• Potential impacts on resources</li> <li>• Effects on flora and fauna</li> <li>• Persistence of an oil type on shoreline</li> <li>• Public response pressures</li> </ul>	Recognize oil types and behavior.  Determine slick trajectory.  Predict fate and consequences.
Hazard recognition	<ul style="list-style-type: none"> <li>• Basic physical chemistry of petroleum and petroleum products</li> <li>• Basic toxicology of oil</li> <li>• MSDSs</li> <li>• Fire and explosion hazards</li> </ul>	Identify properties and hazards associated with the spilled oil or product.
Assess sea and weather conditions.	<ul style="list-style-type: none"> <li>• Influence of sea and weather conditions on oil properties and slick behavior</li> <li>• Boating safety</li> <li>• Implications of sea state and wind speed on response operations</li> </ul>	Recognize limitations of response equipment.  Use data to predict speed and direction of slick transport, fate, and behavior.
Identify and stop discharge at the source.	<ul style="list-style-type: none"> <li>• Causes of spills</li> <li>• Options to stop oil/product flow</li> </ul>	Assist in selecting control measures
Identify response priorities and select countermeasures.	<ul style="list-style-type: none"> <li>• Description of cleanup phases and hardware alternatives</li> <li>• Response steps: stopping, monitoring, confinement, deflection, removal, storage, disposal</li> <li>• Planning and logistics: timing, resource utilization, safety, incident command structure</li> <li>• Protection priorities</li> <li>• Spill control options</li> <li>• Deployment requirements</li> </ul>	Prioritize sensitivity, identify protection zones.  Review merits and disadvantages of spill control alternatives.  Assist in determining best response methodology.
Response cleanup requirements on an ongoing basis	<ul style="list-style-type: none"> <li>• Operational efficiency of equipment and alternative resources</li> <li>• Changing oil properties and environmental factors</li> <li>• New information</li> </ul>	Apply changing data to the selection of cleanup equipment and to the choice of response effort locations to optimize operations.

<b>Table FRP 8.3</b> <b>Position: Recovery/Protection Unit Leader and Team Member</b>		
<b>Task Description</b>	<b>Have Knowledge In</b>	<b>Skill</b>
Collect samples from source and slick.	<ul style="list-style-type: none"> <li>• Legal sampling methods</li> <li>• Properties of oils (e.g., specific gravity, viscosity, pour point, flash point, solubility)</li> </ul>	Demonstrate knowledge of all types, grades, physical, and chemical properties of oils.
Forecast slick transport and spreading.	<ul style="list-style-type: none"> <li>• Effect of oil properties, sea state and weather on spread rate and transport</li> <li>• Spill volume as a function of slick area, thickness, and appearance</li> <li>• Trajectory modeling</li> <li>• Implications to countermeasures operations</li> </ul>	Estimate spill volume and direction of movement.
Identify the effect of weathering on response operations, hazards, and impacts.	<ul style="list-style-type: none"> <li>• Weathering processes: evaporations, dissolution, emulsification, biodegradation, sedimentation</li> <li>• Effect of weather, sea state, and oil type on weathering</li> <li>• Fire hazards</li> <li>• Implications to countermeasures operations</li> </ul>	Assess effect of environmental conditions on oil and product.
Implement safety procedures.	<ul style="list-style-type: none"> <li>• Safety checklist for response operations</li> <li>• Safe work practices: cleanup equipment, petroleum products, site</li> <li>• Personal protective clothing and equipment</li> <li>• Capability of personnel; length of shift, level of training</li> </ul>	<p>Recognize need for and properly use personnel protective clothing and equipment.</p> <p>Prevent unsafe worker performance.</p>
Take appropriate site security measures.	<ul style="list-style-type: none"> <li>• Implement site security and access restrictions</li> </ul>	<p>Use safety equipment.</p> <p>Ensure security of work site.</p>
Assess transportation needs.	<ul style="list-style-type: none"> <li>• Ongoing transportation needs of ALL cleanup phases</li> </ul>	Determine transportation requirements.
Choose appropriate response vessels.	<ul style="list-style-type: none"> <li>• Capabilities of available small boats</li> <li>• Safe deployment and operation of boats</li> <li>• Navigation of small boats</li> <li>• Effects of environmental factors on vessel operations</li> </ul>	<p>Select appropriate means of transportation.</p> <p>Operate vessels safely and effectively.</p>
Use of communications equipment	<ul style="list-style-type: none"> <li>• Response information and communications needs</li> <li>• Portable UHF/VHF radios and cellular telephones</li> <li>• Radio operations protocols and use</li> </ul>	Communicate effectively to facilitate response.

<b>Table FRP 8.3</b> <b>Position: Recovery/Protection Unit Leader and Team Member</b>		
<b>Task Description</b>	<b>Have Knowledge In</b>	<b>Skill</b>
Select appropriate boom.	<ul style="list-style-type: none"> <li>• Main uses of boom: containment, deflection, and protection</li> <li>• Boom components and structure</li> <li>• Types of commercial and improvised booms: skirt, fence, sorbent, etc.</li> <li>• Selection criteria for offshore and nearshore uses</li> <li>• Boom failure mechanisms and solutions: entrainment, drainage, splash over, boom submergence, and planing</li> <li>• Response time</li> <li>• Safety warnings for spills of gasoline or other low flash point products</li> <li>• Site-specific considerations: wetland damage at low tide, mooring to structures, location of nearby amenities or sensitive areas</li> </ul>	Select boom based upon consideration of location, oil type, and environmental factors.
Deploy boom.	<ul style="list-style-type: none"> <li>• Deployment equipment and safety requirements</li> <li>• Selecting boom for response: dependence upon sea state and application</li> <li>• Typical deployment configurations for containment and deflection</li> <li>• Determination of boom angle</li> <li>• Vessel selection</li> <li>• Preparation and inspection</li> <li>• Towing: tow line length, attachment to the tow post</li> <li>• Mooring: anchor size and number, length of mooring line, mooring arrangement</li> <li>• Safety checklist for operations</li> </ul>	Deploy and moor booms to safely and effectively concentrate oil for recovery to protect resources and to deflect slicks.
Retrieve boom.	<ul style="list-style-type: none"> <li>• Recover, clean, disassemble, and store equipment.</li> </ul>	Safely recover booms without damaging.  Clean and store boom.
Select appropriate skimmer.	<ul style="list-style-type: none"> <li>• Skimming principles and types: weir, oleophilic, suction, other</li> </ul>	Select appropriate skimmer for intended application.
Operate skimmers.	<ul style="list-style-type: none"> <li>• Basic engine types, fuel needs, controls, lube and hydraulic systems, fittings and connections</li> <li>• Operational difficulties: breakdown, debris</li> <li>• Safety considerations</li> </ul>	Start, operate, and shut down skimmer.  Monitor for optimum performance and evaluate need to change skimmer type.  Troubleshoot minor problems.
Equipment maintenance	<ul style="list-style-type: none"> <li>• Cleaning, disassembly, and storage</li> <li>• Check and repair equipment.</li> </ul>	Remove oil and debris, repair broken or worn parts, and store skimmer in "ready to use" condition.
Select sorbents.	<ul style="list-style-type: none"> <li>• Characteristics</li> <li>• Sorbent types and effectiveness</li> </ul>	Select effective sorbents.
Use sorbents.	<ul style="list-style-type: none"> <li>• Application of effective sorbent to spill conditions</li> </ul>	Apply, recover, reuse, dispose of sorbents effectively.

<p align="center"><b>Table FRP 8.3</b>  <b>Position: Recovery/Protection Unit Leader and Team Member</b></p>		
<b>Task Description</b>	<b>Have Knowledge In</b>	<b>Skill</b>
Identify appropriate conditions for conducting bioremediation.	<ul style="list-style-type: none"> <li>• Principle of process, agents, and application methods</li> <li>• Limitations and advantages</li> </ul>	Determine applicability of bioremediation to oil cleanup.
Assist in selection of appropriate shoreline cleanup techniques.	<ul style="list-style-type: none"> <li>• Methods and required equipment: natural, mechanical, manual, flushing</li> <li>• Cleanup alternatives vs. environmental sensitivities</li> <li>• Habitat disturbance from cleanup operations</li> <li>• Changing conditions: seasonal, diurnal, tidal</li> <li>• Practical considerations: access, disposal</li> </ul>	<p>Assess factors dictating shoreline response.</p> <p>Assist in selection of appropriate cleanup methods.</p>
Clean up shoreline	<ul style="list-style-type: none"> <li>• Safety considerations: tides, equipment, animals, physical hazards</li> <li>• Careful and efficient execution of response</li> </ul>	
Categorize and quantify collected oily wastes	<ul style="list-style-type: none"> <li>• Oily liquids and solids generated during cleanup</li> </ul>	Determine factors affecting operation of transfer equipment.
Select pumps, conveyors, and other oily waste transfer equipment	<ul style="list-style-type: none"> <li>• Transfer options and mechanical principles: <ul style="list-style-type: none"> <li>— Pumps: centrifugal, loge, gear, intermeshing screw, vane, flexible impeller, screw, auger, progressing cavity, piston, diaphragm</li> <li>— Other: air conveyor, vacuum truck, portable vacuum unit</li> </ul> </li> <li>• Capabilities of transfer equipment: oil viscosity, pour point, debris, abrasive, portability, emulsification, cold weather operations, ease of repair and handling</li> <li>• Lightering operations</li> </ul>	Determine suitable means to transfer materials.
Safely operate waste oil transfer equipment.	<ul style="list-style-type: none"> <li>• Preparation, operation, and disconnection of equipment</li> <li>• Use of controls</li> <li>• Safety considerations</li> </ul>	<p>Safely operate pumps, conveyors, and other equipment.</p> <p>Troubleshoot minor problems.</p>
Store and dispose of oily waste materials generated by cleanup.	<ul style="list-style-type: none"> <li>• Land- and water-based storage options: pit, prefabricated kit, towable tank, drums, trucks (tank, vacuum, dump, pickup), barges (tank, deck, hopper), vessels (workboat, skimmer, supply boat, tanker), plastic bags and tubing, and spent boom</li> <li>• Factors for selection of storage sites (environmental and regulatory)</li> </ul>	<p>Assist in the selection of storage sites and options.</p> <p>Set up and use storage facilities.</p>
Segregate and minimize waste.	<ul style="list-style-type: none"> <li>• Segregation of materials</li> <li>• Waste reduction practices: reuse, oil/water separation, minimal collection of nonoiled material, minimal formation of wastewater</li> </ul>	<p>Sort materials to facilitate storage and disposal.</p> <p>Separate and recycle waste materials.</p>

<b>Table FRP 8.3</b> <b>Position: Recovery/Protection Unit Leader and Team Member</b>		
<b>Task Description</b>	<b>Have Knowledge In</b>	<b>Skill</b>
Facilitate disposal of collected materials.	<ul style="list-style-type: none"> <li>• Disposal options: reprocessing, recycling, landfilling, stabilization, burning, incineration, bioremediation, landfarming</li> <li>• Capabilities of equipment and techniques</li> <li>• Selection of disposal options: environmental, regulatory, access, security</li> <li>• On site disposal for remote locations</li> <li>• Safety, fire control equipment</li> </ul>	Assist in the selection of disposal sites and options.  Operate onsite disposal methods.  Provide feedstock for disposal units.
Restore equipment to prespill conditions.	<ul style="list-style-type: none"> <li>• Cleaning requirements and methods</li> <li>• Wastewater collection</li> <li>• Equipment maintenance and storage</li> </ul>	Restore equipment.
Participate in debriefing.	<ul style="list-style-type: none"> <li>• Technical problems and solutions</li> </ul>	Suggest improved response methods.

<b>Table FRP 8.4</b> <b>Position: Emergency Operations Unit Leader and Team Member</b>		
<b>Task Description</b>	<b>Have Knowledge in</b>	<b>Skill</b>
Hazard recognition	<ul style="list-style-type: none"> <li>• Basic physical chemistry of petroleum and petroleum products</li> <li>• Basic toxicology of oil</li> <li>• MSDSs</li> <li>• Fire and explosion hazards</li> </ul>	Identify properties and hazards associated with the spilled oil or product.
Identify and stop discharge at the source.	<ul style="list-style-type: none"> <li>• Causes of spills</li> <li>• Options to stop oil/product flow</li> </ul>	Assist in selecting control measures.
Identify response priorities and select countermeasures.	<ul style="list-style-type: none"> <li>• Description of cleanup phases and hardware alternatives</li> <li>• Response steps: stopping, monitoring, confinement, deflection, removal, storage, disposal</li> <li>• Planning and logistics: timing, resource utilization, safety, incident command structure</li> <li>• Protection priorities</li> <li>• Spill control options</li> <li>• Deployment requirements</li> </ul>	<p>Prioritize sensitivity, identify protection zones.</p> <p>Review merits and disadvantages of spill control alternatives.</p> <p>Assist in determining best response methodology.</p>
Implement safety procedures.	<ul style="list-style-type: none"> <li>• Safety checklist for response operations</li> <li>• Safe work practices: cleanup equipment, petroleum products, site</li> <li>• Personal protective clothing and equipment</li> <li>• Capability of personnel; length of shift, level of training</li> </ul>	<p>Recognize need for and properly use personnel protective clothing and equipment.</p> <p>Prevent unsafe worker performance.</p>
Take appropriate site security measures.	<ul style="list-style-type: none"> <li>• Implement site security and access restrictions.</li> </ul>	<p>Use safety equipment.</p> <p>Ensure security of work site.</p>
Use of communications equipment	<ul style="list-style-type: none"> <li>• Response information and communications needs</li> <li>• Portable UHF/VHF radios and cellular telephones</li> <li>• Radio operations protocols and use</li> </ul>	Communicate effectively to facilitate response.
Participate in debriefing.	<ul style="list-style-type: none"> <li>• Technical problems and solutions</li> </ul>	Suggest improved response methods.

<b>Table FRP 8.5</b> <b>Position: Air Operations Unit Leader and Team Member</b>		
<b>Task Description</b>	<b>Have Knowledge In</b>	<b>Skill</b>
Assist in initial assessment of spill and potential impacts.	<ul style="list-style-type: none"> <li>• Type and volume of spill sources</li> <li>• General description of causes of spills</li> <li>• Spill volume determination</li> <li>• Oil types</li> <li>• Proximity to shoreline</li> <li>• Potential impacts on resources</li> <li>• Effects on flora and fauna</li> <li>• Persistence of an oil type on shoreline</li> <li>• Public response pressures</li> </ul>	<p>Recognize oil types and behavior.</p> <p>Determine slick trajectory.</p> <p>Predict fate and consequences.</p>
Hazard recognition	<ul style="list-style-type: none"> <li>• Basic physical chemistry of petroleum and petroleum products</li> <li>• Basic toxicology of oil</li> <li>• MSDSs</li> <li>• Fire and explosion hazards</li> </ul>	Identify properties and hazards associated with the spilled oil or product.
Assess sea and weather conditions.	<ul style="list-style-type: none"> <li>• Influence of sea and weather conditions on oil properties and slick behavior</li> <li>• Boating safety</li> <li>• Implications of sea state and wind speed on response operations</li> </ul>	<p>Recognize limitations of response equipment.</p> <p>Use data to predict speed and direction of slick transport, fate, and behavior.</p>
Forecast slick transport and spreading.	<ul style="list-style-type: none"> <li>• Effect of oil properties, sea state and weather on spread rate and transport</li> <li>• Spill volume as a function of slick area, thickness, and appearance</li> <li>• Trajectory modeling</li> <li>• Implications to countermeasures operations</li> </ul>	Estimate spill volume and direction of movement.
Identify the effect of weathering on response operations, hazards, and impacts.	<ul style="list-style-type: none"> <li>• Weathering processes: evaporations, dissolution, emulsification, biodegradation, sedimentation</li> <li>• Effect of weather, sea state, and oil type on weathering</li> <li>• Fire hazards</li> <li>• Implications to countermeasures operations</li> </ul>	Assess effect of environmental conditions on oil and product.
Implement safety procedures.	<ul style="list-style-type: none"> <li>• Safety checklist for response operations</li> <li>• Safe work practices: cleanup equipment, petroleum products, site</li> <li>• Personal protective clothing and equipment</li> <li>• Capability of personnel; length of shift, level of training</li> </ul>	<p>Recognize need for and properly use personnel protective clothing and equipment.</p> <p>Prevent unsafe worker performance.</p>
Use of communications equipment	<ul style="list-style-type: none"> <li>• Response information and communications needs</li> <li>• Portable UHF/VHF radios and cellular telephones</li> <li>• Radio operations protocols and use</li> </ul>	Communicate effectively to facilitate response.
Participate in debriefing.	<ul style="list-style-type: none"> <li>• Technical problems and solutions</li> </ul>	Suggest improved response methods.

<p align="center"><b>Table FRP 8.6</b>  <b>Position: Wildlife Unit Leader and Team Member</b></p>		
<b>Task Description</b>	<b>Have Knowledge In</b>	<b>Skill</b>
Resource Protection	<ul style="list-style-type: none"> <li>• Deploy deflection and/or containment boom</li> <li>• Deploy sorbent materials</li> <li>• Construct dikes and/or dams</li> <li>• Report on the effectiveness of booming/diking arrangements</li> <li>• Identify protection resource needs, such as: <ul style="list-style-type: none"> <li>— Boom types</li> <li>— Boom lengths</li> <li>— Mooring systems</li> <li>— Anchor buoy and lights</li> <li>— Vessel support equipment</li> </ul> </li> </ul>	<p>Boom deployment</p> <p>Onshore recovery and containment techniques</p>
Assist in initial assessment of spill and potential impacts.	<ul style="list-style-type: none"> <li>• Type and volume of spill sources</li> <li>• General description of causes of spills</li> <li>• Spill volume determination</li> <li>• Oil types</li> <li>• Proximity to shoreline</li> <li>• Potential impacts on resources</li> <li>• Effects on flora and fauna</li> <li>• Persistence of an oil type on shoreline</li> <li>• Public response pressures</li> </ul>	<p>Recognize oil types and behavior.</p> <p>Determine slick trajectory.</p> <p>Predict fate and consequences.</p>
Hazard recognition	<ul style="list-style-type: none"> <li>• Basic physical chemistry of petroleum and petroleum products</li> <li>• Basic toxicology of oil</li> <li>• MSDSs</li> <li>• Fire and explosion hazards</li> </ul>	<p>Identify properties and hazards associated with the spilled oil or product.</p>
Assess sea and weather conditions.	<ul style="list-style-type: none"> <li>• Influence of sea and weather conditions on oil properties and slick behavior</li> <li>• Boating safety</li> <li>• Implications of sea state and wind speed on response operations</li> </ul>	<p>Recognize limitations of response equipment.</p> <p>Use data to predict speed and direction of slick transport, fate, and behavior.</p>
Identify response priorities and select countermeasures.	<ul style="list-style-type: none"> <li>• Description of cleanup phases and hardware alternatives</li> <li>• Response steps: stopping, monitoring, confinement, deflection, removal, storage, disposal</li> <li>• Planning and logistics: timing, resource utilization, safety, incident command structure</li> <li>• Protection priorities</li> <li>• Spill control options</li> <li>• Deployment requirements</li> </ul>	<p>Prioritize sensitivity, identify protection zones.</p> <p>Review merits and disadvantages of spill control alternatives.</p> <p>Assist in determining best response methodology.</p>
Response cleanup requirements on an ongoing basis	<ul style="list-style-type: none"> <li>• Operational efficiency of equipment and alternative resources</li> <li>• Changing oil properties and environmental factors</li> <li>• New information</li> </ul>	<p>Apply changing data to the selection of cleanup equipment and to the choice of response effort locations to optimize operations.</p>

<b>Table FRP 8.6</b> <b>Position: Wildlife Unit Leader and Team Member</b>		
<b>Task Description</b>	<b>Have Knowledge In</b>	<b>Skill</b>
Implement safety procedures.	<ul style="list-style-type: none"> <li>• Safety checklist for response operations</li> <li>• Safe work practices: cleanup equipment, petroleum products, site</li> <li>• Personal protective clothing and equipment</li> <li>• Capability of personnel; length of shift, level of training</li> </ul>	<p>Recognize need for and properly use personnel protective clothing and equipment.</p> <p>Prevent unsafe worker performance.</p>
Use of communications equipment	<ul style="list-style-type: none"> <li>• Response information and communications needs</li> <li>• Portable UHF/VHF radios and cellular telephones</li> <li>• Radio operations protocols and use</li> </ul>	<p>Communicate effectively to facilitate response.</p>
Identify appropriate conditions for conducting bioremediation.	<ul style="list-style-type: none"> <li>• Principle of process, agents, and application methods</li> <li>• Limitations and advantages</li> </ul>	<p>Determine applicability of bioremediation to oil cleanup.</p>
Assist in selection of appropriate shoreline cleanup techniques.	<ul style="list-style-type: none"> <li>• Methods and required equipment: natural, mechanical, manual, flushing</li> <li>• Cleanup alternatives vs. environmental sensitivities</li> <li>• Habitat disturbance from cleanup operations</li> <li>• Changing conditions: seasonal, diurnal, tidal</li> <li>• Practical considerations: access, disposal</li> </ul>	<p>Assess factors dictating shoreline response.</p> <p>Assist in selection of appropriate cleanup methods.</p>
Participate in debriefing.	<ul style="list-style-type: none"> <li>• Technical problems and solutions</li> </ul>	<p>Suggest improved response methods.</p>

<b>Table FRP 8.7</b> <b>Position Title: Site Management Unit Leader and Team Member</b>		
<b>Task Description</b>	<b>Have Knowledge In</b>	<b>Skill</b>
Hazard recognition	<ul style="list-style-type: none"> <li>• Basic physical chemistry of petroleum and petroleum products</li> <li>• Basic toxicology of oil</li> <li>• Material safety data sheets</li> <li>• Fire and explosion hazards</li> </ul>	Identify properties and hazards associated with the spilled oil or product
Implement safety procedures	<ul style="list-style-type: none"> <li>• Safety checklist for response operations</li> <li>• Safe work practices: cleanup equipment, petroleum products, site</li> <li>• Personal protective clothing and equipment</li> <li>• Capability of personnel; length of shift, level of training</li> </ul>	Recognize need for and properly use personnel protective clothing and equipment  Prevent unsafe worker performance
Take appropriate site security measures	<ul style="list-style-type: none"> <li>• Implement site security and access restrictions</li> </ul>	Use safety equipment  Ensure security of work site
Assess transportation needs	<ul style="list-style-type: none"> <li>• Ongoing transportation needs of ALL cleanup phases</li> </ul>	Determine transportation requirements
Choose appropriate response vessels	<ul style="list-style-type: none"> <li>• Capabilities of available small boats</li> <li>• Safe deployment and operation of boats</li> <li>• Navigation of small boats</li> <li>• Effects of environmental factors on vessel operations</li> </ul>	Select appropriate means of transportation  Operate vessels safely and effectively
Use of communications equipment	<ul style="list-style-type: none"> <li>• Response information and communications needs</li> <li>• Portable UHF/VHF radios and cellular telephones</li> <li>• Radio operations protocols and use</li> </ul>	Communicate effectively to facilitate response
Store and dispose of oily waste materials generated by cleanup	<ul style="list-style-type: none"> <li>• Land and water based storage options: pit, prefabricated kit, towable tank, drums, trucks (tank, vacuum, dump, pickup), barges (tank, deck, hopper), vessels (workboat, skimmer, supply boat, tanker), plastic bags and tubing, and spent boom</li> <li>• Factors for selection of storage sites (environmental and regulatory)</li> </ul>	Assist in the selection of storage sites and options  Set up and use storage facilities
Segregate and minimize waste	<ul style="list-style-type: none"> <li>• Segregation of materials</li> <li>• Waste reduction practices: reuse, oil/water separation, minimal collection of non-oiled material, minimal formation of waste water</li> </ul>	Sort materials to facilitate storage and disposal  Separate and recycle waste materials
Facilitate disposal of collected materials	<ul style="list-style-type: none"> <li>• Disposal options: reprocessing, recycling, landfilling, stabilization, burning, incineration, bioremediation, landfarming</li> <li>• Capabilities of equipment and techniques</li> <li>• Selection of disposal options: environmental, regulatory, access, security</li> <li>• On site disposal for remote locations</li> <li>• Safety, fire control equipment</li> </ul>	Assist in the selection of disposal sites and options  Operate on site disposal methods  Provide feedstock for disposal units
Restore equipment to prespill conditions	<ul style="list-style-type: none"> <li>• Cleaning requirements and methods</li> <li>• Waste water collection</li> <li>• Equipment maintenance and storage</li> </ul>	Perform equipment restoration activities
Participate in debriefing	<ul style="list-style-type: none"> <li>• Technical problems and solutions</li> </ul>	Suggest improved response methods

<b>Table FRP 8.8</b> <b>Position Title: Planning Section Chief</b>		
<b>Task Description</b>	<b>Have Knowledge In</b>	<b>Skill</b>
Prepare response action plan	<ul style="list-style-type: none"> <li>• Elements of a viable response plan               <ul style="list-style-type: none"> <li>— time available</li> <li>— resources available</li> <li>— containment plan</li> <li>— protection/deflection plan</li> <li>— oil recovery plan</li> <li>— temporary storage plan</li> <li>— disposal plan</li> <li>— dispersant application plan</li> <li>— site safety plan</li> <li>— Equipment deployment plan</li> <li>— personnel protect equipment</li> <li>— plan adjustment mechanisms</li> </ul> </li> </ul>	Prepare and brief plan
Conduct briefings	<ul style="list-style-type: none"> <li>• Briefing techniques</li> </ul>	Conduct briefings for: senior officers subordinates community media
Spill trajectory forecasting	<ul style="list-style-type: none"> <li>• Influence of sea and weather conditions on oil properties and slick behavior/spread rate</li> <li>• Estimating spill size</li> <li>• Trajectory modeling</li> </ul>	Use data to predict speed and direction of oil movement
Personnel management	<ul style="list-style-type: none"> <li>• Team leadership</li> <li>• Time management</li> <li>• Stress management</li> <li>• Delegations methods</li> </ul>	Identify/define/assign tasks & expectations  Monitor results
Make recommendations for improved preparedness	<ul style="list-style-type: none"> <li>• Familiarity with existing contingency plan</li> </ul>	Demonstrate the ability to make pertinent recommendations for improvements to the contingency plan  Demonstrate analytical skills

<b>Table 8.9</b> <b>Position Title: Strategy &amp; Tactics Planning Unit Leader and Team Members</b>		
<b>Task Description</b>	<b>Have Knowledge In</b>	<b>Skill</b>
Assist in preparation of response action plan	<ul style="list-style-type: none"> <li>• Elements of a tactical response plan               <ul style="list-style-type: none"> <li>— time available</li> <li>— resources available</li> <li>— containment plan</li> <li>— protection/deflection plan</li> <li>— oil recovery plan</li> <li>— temporary storage plan</li> <li>— disposal plan</li> <li>— dispersant application plan</li> <li>— Equipment deployment plan</li> <li>— plan adjustment mechanisms</li> </ul> </li> </ul>	Assist in Preparation of plans
Spill trajectory forecasting	<ul style="list-style-type: none"> <li>• Influence of sea and weather conditions on oil properties and slick behavior/spread rate</li> <li>• Estimating spill size</li> <li>• Trajectory modeling</li> </ul>	Use data to predict speed and direction of oil movement
Make recommendations for improved preparedness	<ul style="list-style-type: none"> <li>• Familiarity with existing contingency plan</li> </ul>	Demonstrate the ability to make pertinent recommendations for improvements to the contingency plan  Demonstrate analytical skills

<p align="center"><b>Table FRP 8.10</b>  <b>Position Title: Health &amp; Safety Planning Unit Leader and Team Member</b></p>		
<b>Task Description</b>	<b>Have Knowledge In</b>	<b>Skill</b>
Prepare Health & Safety Plan	<ul style="list-style-type: none"> <li>• Elements of a plan <ul style="list-style-type: none"> <li>— resources available</li> <li>— spilled oil/product hazard evaluation</li> <li>— physical site hazards</li> <li>— personnel protect equipment</li> </ul> </li> </ul>	Prepare and brief plan
Implement safety procedures	<ul style="list-style-type: none"> <li>• Safety checklist for response operations</li> <li>• Safe work practices: cleanup equipment, petroleum products, sites</li> <li>• Personal protective clothing and equipment</li> <li>• Capability of personnel: length of shift, level of training, physical exposures</li> </ul>	<p>Recognize need for and properly select personal protective clothing and equipment</p> <p>Prevent unsafe worker performance</p>
Ensure provision of first aid and access to medical facilities	<ul style="list-style-type: none"> <li>• Safety risks of petroleum identified</li> <li>• Effects of exposure from: inhalation, dermal contact, ingestion</li> <li>• Safety risks and handling guidelines for equipment</li> <li>• Safe boating practices and guidelines</li> <li>• first aid</li> <li>• MSDS</li> </ul>	<p>Facilitate care of injured personnel</p> <p>Prevent self injury</p>
Conduct safety briefings	<ul style="list-style-type: none"> <li>• Briefing techniques</li> </ul>	<p>Conduct briefings for:</p> <p>senior officers subordinates community media</p>
Use of communications equipment	<ul style="list-style-type: none"> <li>• Response information and communications needs</li> <li>• Portable UHF/VHF radios and cellular telephones</li> <li>• Radio operations protocols and use</li> </ul>	Communicate effectively to facilitate response
Make recommendations for improved preparedness	<ul style="list-style-type: none"> <li>• Familiarity with existing contingency plan</li> </ul>	<p>Demonstrate the ability to make pertinent recommendations for improvements to the contingency plan</p> <p>Demonstrate analytical skills</p>

<p align="center"><b>Table 8.11</b>  <b>Position Title: Natural Resources Planning Unit Leader and Team Member</b></p>		
<b>Task Description</b>	<b>Have Knowledge In</b>	<b>Skill</b>
Assist in preparation of response action plan	<ul style="list-style-type: none"> <li>• Elements of a response plan               <ul style="list-style-type: none"> <li>— time available</li> <li>— resources available</li> <li>— containment plan</li> <li>— protection/deflection plan</li> <li>— oil recovery plan</li> <li>— temporary storage plan</li> <li>— disposal plan</li> <li>— dispersant application plan</li> <li>— equipment deployment plan</li> <li>— plan adjustment mechanisms</li> </ul> </li> </ul>	Assist in Preparation of plans
Resource Protection	<ul style="list-style-type: none"> <li>• Deploy deflection and/or containment boom</li> <li>• Deploy sorbent materials</li> <li>• Construct dikes and/or dams</li> <li>• Report on the effectiveness of booming/diking arrangements</li> <li>• Identify protection resource needs, such as:               <ul style="list-style-type: none"> <li>— boom types</li> <li>— boom lengths</li> <li>— mooring systems</li> <li>— anchor buoy and lights</li> <li>— vessel support equipment</li> </ul> </li> </ul>	<p>Boom deployment</p> <p>On shore recovery and containment techniques</p>
Assist in initial assessment of spill and potential impacts	<ul style="list-style-type: none"> <li>• Type and volume of spill sources</li> <li>• General description of causes of spills</li> <li>• Spill volume determination</li> <li>• Oil types</li> <li>• Proximity to shoreline</li> <li>• Potential impacts on resources</li> <li>• Effects on flora and fauna</li> <li>• Persistence of an oil type on shoreline</li> <li>• Public response pressures</li> </ul>	<p>Recognize oil types and behavior</p> <p>Determine slick trajectory</p> <p>Predict fate and consequences</p>
Hazard recognition	<ul style="list-style-type: none"> <li>• Basic physical chemistry of petroleum and petroleum products</li> <li>• Basic toxicology of oil</li> <li>• Material safety data sheets</li> <li>• Fire and explosion hazards</li> </ul>	Identify properties and hazards associated with the spilled oil or product
Assess sea and weather conditions	<ul style="list-style-type: none"> <li>• Influence of sea and weather conditions on oil properties and slick behavior</li> <li>• Boating safety</li> <li>• Implications of sea state and wind speed on response operations</li> </ul>	<p>Recognize limitations of response equipment</p> <p>Use data to predict speed and direction of slick transport, fate, and behavior</p>

<b>Table 8.11</b> <b>Position Title: Natural Resources Planning Unit Leader and Team Member</b>		
<b>Task Description</b>	<b>Have Knowledge In</b>	<b>Skill</b>
Identify response priorities and select counter measures	<ul style="list-style-type: none"> <li>• Description of cleanup phases and hardware alternatives</li> <li>• Response steps: stopping, monitoring confinement, deflection, removal, storage, disposal</li> <li>• Planning and logistics: timing, resource utilization, safety, incident command structure</li> <li>• Protection priorities</li> <li>• Spill control options</li> <li>• Deployment requirements</li> </ul>	Prioritize sensitivity, identify protection zones  Review merits and disadvantages of spill control alternatives  Assist in determining best response methodology
Response cleanup requirements on an ongoing basis	<ul style="list-style-type: none"> <li>• Operational efficiency of equipment and alternative resources</li> <li>• Changing oil properties and environmental factors</li> <li>• New information</li> </ul>	Apply changing data to the selection of cleanup equipment and to the choice of response effect locations to optimize operations
Use of communications equipment	<ul style="list-style-type: none"> <li>• Response information and communications needs</li> <li>• Portable UHF/VHF tildes and cellular telephones</li> <li>• Radio operations protocols and use</li> </ul>	Communicate effectively to facilitate response
Identify appropriate conditions for conducting bioremediation	<ul style="list-style-type: none"> <li>• Principle of process, agents, and application methods</li> <li>• Limitations and advantages</li> </ul>	Determine applicability of bioremediation to oil cleanup
Assist in selection of appropriate shoreline cleanup techniques	<ul style="list-style-type: none"> <li>• Methods and required equipment: natural, mechanical, manual, flushing</li> <li>• Cleanup alternatives vs. environmental sensitivities</li> <li>• Habitat disturbance from cleanup operations</li> <li>• Changing conditions: seasonal, diurnal, tidal</li> <li>• Practical considerations: access, disposal</li> </ul>	Assess factors dictating shoreline response  Assist in selection of appropriate cleanup methods
Participate in debriefing	<ul style="list-style-type: none"> <li>• Technical problems and solutions</li> </ul>	Suggest improved response methods

<b>Table FRP 8.12</b> <b>Position Title: Demobilization Planning Unit Leader and Team Member</b>		
<b>Task Description</b>	<b>Have Knowledge In</b>	<b>Skill</b>
Prepare demobilization action plan	<ul style="list-style-type: none"> <li>• Elements of a viable response plan               <ul style="list-style-type: none"> <li>— timing of completion of work unit</li> <li>— resources on scene</li> <li>— plan adjustment mechanisms</li> </ul> </li> </ul>	Prepare and brief plan
Conduct briefings	<ul style="list-style-type: none"> <li>• Briefing techniques</li> </ul>	Conduct briefings for: <ul style="list-style-type: none"> <li>senior officers</li> <li>subordinates</li> <li>community</li> <li>media</li> </ul>
Use of communications equipment	<ul style="list-style-type: none"> <li>• Response information and communications needs</li> <li>• Portable UHF/VHF radios and cellular telephones</li> <li>• Radio operations protocols and use</li> </ul>	Communicate effectively to facilitate response
Make recommendations for improved preparedness	<ul style="list-style-type: none"> <li>• Familiarity with existing contingency plan</li> </ul>	Demonstrate the ability to make pertinent recommendations for improvements to the contingency plan  Demonstrate analytical skills

**Table FRP 8.13**  
**Position Title: Finance Section Chief**

<b>Task Description</b>	<b>Have Knowledge In</b>	<b>Skill</b>
Maintain contracting records	<ul style="list-style-type: none"> <li>• Contract agreements</li> <li>• Market rates</li> <li>• Purchase order system</li> <li>• Basic Ordering Agreements</li> <li>• Change order agreements</li> <li>• Accounting procedures</li> </ul>	Establish log keeping procedures for: contractors subcontractors leased equipment consumable personnel
Establish claims office	<ul style="list-style-type: none"> <li>• Claims procedures</li> <li>• Regulatory requirements</li> </ul>	Organize claims office  Delegate claims responsibility
Coordinate subcontracted services	<ul style="list-style-type: none"> <li>• Contracting procedures</li> <li>• Basic ordering agreements</li> <li>• Market rates</li> <li>• Daily work sheets</li> </ul>	Assess need for subcontracted services  Execute contracts  Define role of subcontractors in overall response organization  Monitor work
Conduct briefings	<ul style="list-style-type: none"> <li>• Briefing techniques</li> </ul>	Conduct briefings for: senior officers subordinates contractors subcontractors
Verify/certify costs	<ul style="list-style-type: none"> <li>• Reasons for cost documentation</li> <li>• Liability, cost recovery</li> <li>• Daily log procedures</li> <li>• Equipment cost report</li> <li>• Manpower forms</li> <li>• Invoices for contract services</li> <li>• Personnel activity sheets</li> <li>• Daily worksheets</li> <li>• Travel claims</li> <li>• Accident claims</li> </ul>	Present a plan for filing and record maintenance  consolidate records and produce reports of expenditures by category
Provide final cost documentation report	<ul style="list-style-type: none"> <li>• Cost document procedures</li> <li>• Report writing techniques</li> <li>• Coding structure</li> </ul>	Construct a simple coding structure for the response  Produce final cost report
Personnel management	<ul style="list-style-type: none"> <li>• Team leadership</li> <li>• Time management</li> <li>• Stress management</li> <li>• Delegations methods</li> </ul>	Identify/define/assign tasks & expectations  Monitor results

<b>Table FRP 8.14</b> <b>Position Title: Contract Branch Leader and Team Member</b>		
<b>Task Description</b>	<b>Have Knowledge In</b>	<b>Skill</b>
Maintain contracting records	<ul style="list-style-type: none"> <li>• Contract agreements</li> <li>• Market rates</li> <li>• Purchase order system</li> <li>• Basic Ordering Agreements</li> <li>• Change order agreements</li> <li>• Accounting procedures</li> </ul>	Establish log keeping procedures for:  contractors subcontractors leased equipment consumable personnel
Coordinate subcontracted services	<ul style="list-style-type: none"> <li>• Contracting procedures</li> <li>• Basic ordering agreements</li> <li>• Market rates</li> <li>• Daily work sheets</li> </ul>	Assess need for subcontracted services  Execute contracts  Define role of subcontractors in overall response organization  Monitor work

<b>Table FRP 8.15</b> <b>Position Title: Cost Branch Leader and Team Member</b>		
<b>Task Description</b>	<b>Have Knowledge In</b>	<b>Skill</b>
Verify/certify costs	<ul style="list-style-type: none"> <li>• Reasons for cost documentation</li> <li>• Liability, cost recovery</li> <li>• Daily log procedures</li> <li>• Equipment cost report</li> <li>• Manpower forms</li> <li>• Invoices for contract services</li> <li>• Personnel activity sheets</li> <li>• Daily worksheets</li> <li>• Travel claims</li> <li>• Accident claims</li> </ul>	Present a plan for filing and record maintenance  consolidate records and produce reports of expenditures by category
Provide final cost documentation report	<ul style="list-style-type: none"> <li>• Cost document procedures</li> <li>• Report writing techniques</li> <li>• Coding structure</li> </ul>	Construct a simple coding structure for the response  Produce final cost report
Participate in debriefing	<ul style="list-style-type: none"> <li>• Technical problems and solutions</li> </ul>	Suggest improved response methods

<b>Table FRP 8.16</b> <b>Position Title: Claims Branch Leader and Team Member</b>		
<b>Task Description</b>	<b>Have Knowledge In</b>	<b>Skill</b>
Establish claims office	<ul style="list-style-type: none"> <li>• Claims procedures</li> <li>• Regulatory requirements</li> </ul>	Organize claims office  Delegate claims responsibility
Verify/certify costs	<ul style="list-style-type: none"> <li>• Reasons for cost documentation</li> <li>• Liability, cost recovery</li> <li>• Daily log procedures</li> <li>• Equipment cost report</li> <li>• Manpower forms</li> <li>• Invoices for contract services</li> <li>• Personnel activity sheets</li> <li>• Daily worksheets</li> <li>• Travel claims</li> <li>• Accident claims</li> </ul>	Present a plan for filing and record maintenance  consolidate records and produce reports of expenditures by category
Provide final cost documentation report	<ul style="list-style-type: none"> <li>• Cost document procedures</li> <li>• Report writing techniques</li> <li>• Coding structure</li> </ul>	Construct a simple coding structure for the response  Produce final cost report
Participate in debriefing	<ul style="list-style-type: none"> <li>• Technical problems and solutions</li> </ul>	Suggest improved response methods

Table FRP 8.17		
Task Description	Have Knowledge in	Skill
<b>Position Title: Logistics Section Chief</b>		
Identify resources	<ul style="list-style-type: none"> <li>• Location of additional resources</li> <li>• Means to obtain resources</li> <li>• Regional agreements</li> <li>• Basis ordering agreements</li> <li>• Negotiations</li> <li>• Contracting procedures</li> </ul>	Locate and acquire additional resources
Shut down field operations	<ul style="list-style-type: none"> <li>• Updated inventory and location of equipment and personnel</li> <li>• Procedures to terminate operations</li> </ul>	Describe how the operations should be terminated in an orderly manner
Make recommendations for improved preparedness	<ul style="list-style-type: none"> <li>• Familiarity with existing contingency plan</li> </ul>	Demonstrate the ability to make pertinent recommendations for improvements to the contingency plan  Demonstrate analytical skills
Personnel management	<ul style="list-style-type: none"> <li>• Team leadership</li> <li>• Time management</li> <li>• Stress management</li> <li>• Delegations methods</li> </ul>	Identify/define/assign tasks & expectations  Monitor results
<b>Position Title: Support Unit Leader and Team Member</b>		
Identify resources	<ul style="list-style-type: none"> <li>• Location of additional resources</li> <li>• Means to obtain resources</li> <li>• Regional agreements</li> <li>• Basis ordering agreements</li> <li>• Negotiations</li> <li>• Contracting procedures</li> </ul>	Locate and acquire additional resources
Use of communications equipment	<ul style="list-style-type: none"> <li>• Response information and communications needs</li> <li>• Portable UHF/VHF tildes and cellular telephones</li> <li>• Radio operations protocols and use</li> </ul>	Communicate effectively to facilitate response
Assess transport needs	<ul style="list-style-type: none"> <li>• Ongoing transportation needs for ALL cleanup phases</li> </ul>	Determine transportation requirements
Make recommendations for improved preparedness	<ul style="list-style-type: none"> <li>• Familiarity with existing contingency plan</li> </ul>	Demonstrate the ability to make pertinent recommendations for improvements to the contingency plan  Demonstrate analytical skills

<b>Table FRP 8.18</b> <b>Position Title: Personnel Unit Leader and Team Member</b>		
<b>Task Description</b>	<b>Have Knowledge In</b>	<b>Skill</b>
Identify personnel resources	<ul style="list-style-type: none"> <li>• Location of additional personnel resources</li> <li>• Means to obtain personnel resources</li> <li>• Negotiations</li> <li>• Contracting procedures</li> </ul>	Locate and acquire additional personnel resources
Document assignment of personnel	<ul style="list-style-type: none"> <li>• Personnel assignment and status reports</li> </ul>	Develop and utilize a personnel locator system and track the assignment and location of personnel
Use of communications equipment	<ul style="list-style-type: none"> <li>• Response information and communications needs</li> <li>• Portable UHF/VHF tildes and cellular telephones</li> <li>• Radio operations protocols and use</li> </ul>	Communicate effectively to facilitate response
Assess transport needs	<ul style="list-style-type: none"> <li>• Ongoing transportation needs for personnel cleanup phases</li> </ul>	Determine transportation requirements
Make recommendations for improved preparedness	<ul style="list-style-type: none"> <li>• Familiarity with existing contingency plan</li> </ul>	Demonstrate the ability to make pertinent recommendations for improvements to the contingency plan  Demonstrate analytical skills

<b>Table FRP 8.19</b> <b>Position Title: Service Unit Leader and Team Member</b>		
<b>Task Description</b>	<b>Have Knowledge In</b>	<b>Skill</b>
Provide for emergency and routine medical services	<ul style="list-style-type: none"> <li>Identify medical resources and logistics support needs</li> <li>Report medical unit needs</li> </ul>	Manage/coordinate medical resources
Provide food and berthing services	<ul style="list-style-type: none"> <li>Catering service agreements</li> <li>Establishing kitchens, galleys, canteens</li> <li>Drinking water sources</li> <li>Motel/hotel contracts</li> <li>Identify berthing quarters, barracks vessels, camping gear, personal hygiene equipment, and restroom facilities</li> </ul>	Develop living/berthing/messing facilities  Report the status of berthing units
Use of communications equipment	<ul style="list-style-type: none"> <li>Response information and communications needs</li> <li>Portable UHF/VHF tildes and cellular telephones</li> <li>Radio operations protocols and use</li> </ul>	Communicate effectively to facilitate response
Make recommendations for improved preparedness	<ul style="list-style-type: none"> <li>Familiarity with existing contingency plan</li> </ul>	Demonstrate the ability to make pertinent recommendations for improvements to the contingency plan  Demonstrate analytical skills

<b>Table FRP 8.20</b> <b>Position Title: Communications Unit Leader and Team Member</b>		
<b>Task Description</b>	<b>Have Knowledge In</b>	<b>Skill</b>
Develop communications network	<ul style="list-style-type: none"> <li>Response information and communications needs</li> <li>Portable UHF/VHF tildes and cellular telephones</li> <li>Radio operations protocols and use</li> </ul>	Develop effective communications network to facilitate response
Participate in debriefing	<ul style="list-style-type: none"> <li>Technical problems and solutions</li> </ul>	Suggest improved response methods

## 8.2 Drills and Exercise Procedures

The CG has developed the National Preparedness for Response Exercise Program (PREP) guidance document. The PREP is a unified federal effort and incorporates the exercise requirements of the CG, EPA, RSPA Office of Pipeline Safety (OPS) and the Minerals Management Service. Adoption of and participation in the PREP will satisfy all OPA 90 mandated federal pollution response exercise requirements. At this time the PREP only address the requirements for oil pollution response, but it is anticipated that HS exercise requirements will be added in the future.

Every three years all components of the entire response plan must be exercised. The purpose of this requirement is to ensure that all components of the plan function adequately for response to an oil or hazardous substance spill rather than requiring each plan holder to conduct a major exercise every three years that tests all components at once. The PREP approach provides the same results without imposing an undue burden on the plan holder.

In the triennial cycle, the following internal exercises must be conducted:

- 12 Qualified Individual notification drills
- 3 spill Management Team table top exercises, one of which must involve a worst case discharge scenario
- 3 Unannounced Exercises (any of the exercises, with the exception of the QI Notification Drill, if conducted unannounced, will satisfy this requirement). One of the Unannounced Exercises must be an Equipment Deployment Exercise
- 6 Facility-owned Equipment Deployment Exercises (for facilities with facility-owned equipment identified in their response plan).
- 3 Oil Spill Response Organization (OSRO) Equipment Deployment Exercises

Drills are to be designed to test the fifteen core components of a response plan: Following is a sample schedule for the triennial cycle:

	Jan	Feb	Mar	Apr	May	June	July	Aug	Sept	Oct	Nov	Dec
Year 1	QIN	TTE	FEX	QIN			QIN	FEX	OSRO	QIN		
Year 2	FEX (U)	QIN	OSRO		QIN	TTE (U)	FEX	QIN			QIN	
Year 3			QIN		FEX (U)	QIN	OSRO (U)		QIN	TTE	FEX	QIN

**Notes:**

- QIN — Qualified Individual Notification Drill
- TTE — Management Team Table Top Exercise
- FEX — Facility Owned Equipment Deployment Exercise
- OSRO — Oil Spill Response Organization Equipment Deployment Exercise
- (U) — Indicates an unannounced drill

<b>Table FRP 8.21</b> <b>Core Test Components of a Response Plan</b>		
<b>Organizational Design</b>	<b>Operational Response</b>	<b>Response Support</b>
Notifications	Discharge Control	Communications
Staff Mobilization	Assessment of Discharge	Transportation
Ability to operate within the response management system described in the plan	Containment of Discharge	Personnel Support
	Recovery of Spilled Material	Equipment Maintenance and Support
	Protection of Economically, Politically, Socially, and Environmentally Sensitive Areas	Procurement
	Disposal of Recovered Products	Documentation

#### **Outline Note**

While each of these components may not be contained in each plan, the plan holder will identify those components that are applicable from the list above and add or delete components as appropriate. The objective of exercising each component is to ensure that enough information and guidance is available to the user for adequate spill response.

In addition to the internal drills and exercises, Area Exercises will be conducted to test the entire response community in a particular geographic area. The goal is to conduct 20 Area Exercises per year nationwide. All of the Area Exercises will be developed by an exercise design team. The design team will be comprised of representatives from the Federal, State, and local Governments, environmentalists, and industry. NAS Corpus Christi participation is highly recommended. The "lead plan holder" (which could be the NAS Corpus Christi facility) will be the organization that holds the primary exercise, however, all members of the Area Committee will participate and the Navy is encouraged to participate to the maximum extent practicable.

To meet the triennial cycle of exercising the entire response plan, it is not necessary to exercise the entire plan all at one time. The plan may be exercised in segments over a period of three years, as long as each component of the plan is exercised at least once within the three year period. If the components prove to be adequate when exercised separately, they should be able to be incorporated smoothly into the whole system when implementing the entire plan during a response.

### **8.3 Training Logs**

Owners and operators are required by 40 CFR 112.20(e)(8) to keep a personnel training log that includes a record of all formal response training received by each employee. Suggested formats for Personnel training logs/training areas meeting logs are presented in Table FRP 8.23: On-the-Job Training Record. These records of training should be maintained with other personal training records.

#### **8.3.1 Personnel Training**

Various Personnel Training courses are available. See Table FRP 8.22 for some suggestions and a format to capture attendance and participation. Each individual should have a training folder that contains the type of training completed, the training date, and any copies of certificates awarded. A copy of large audience training should be noted on a general personnel training form and placed in individual records.

**Table FRP 8.22  
On-the-Job Training Record**

Type of Training	Training Dates and Number of Hours												Notes
<b>Fire Prevention</b>													
1. Location of Equipment													
2. Phone Recall													
3. Simulate Exercises													
4. Acting Fire Chief: 80 hr Indoctrination													
5. Six-month Update													
<b>Note:</b> No local records													
<b>Safety and Health</b>													
1. First Aid													
2. Emergency Numbers													
3. Monthly Site Safety Training													
4. MSDs													
5. Drug/Alcohol													
6. Confined Space Entry													
7. HM-126 Safe Transportation of Hazardous Materials													
8. Hazardous Waste Operations (HAZWOPER)													
<b>Security: Procedure</b>													
1. Terminal Area													
2. Safe Guard: Gov't/Company Equipment/Property													
3. Seals													
4. Policy/Instructions													
5. Bomb Threat													
<b>Valve Operation</b>													
1. Quick Turn													
2. Gate Valves													
3. By-Pass													
4. Issue/Receipt Valves (16" & 18")													

**Table FRP 8.22  
On-the-Job Training Record**

Type of Training	Training Dates and Number of Hours												Notes
<b>Bottom Loading</b>													
1. Ground Unit													
2. Check for previous													
3. Connect Scully													
4. Connect Loaders													
5. Check Quantity/Calibration													
6. API/Temp/Sample													
7. Seals													
8. Disconnect													
<b>Fuel Spills</b>													
1. Spill Prev./Control Countermeasure Plan													
2. Oil Pollution Prevention													
3. Scavenger: Environmental Cleanup Equipment													
4. RCRA: Hazardous Waste Training													
5. EPA: NDPES													
6. Oil Spill training													
7. Texas A&M Oil Spill Course													
8. HAZMAT													
<b>Sampling/Gauging</b>													
1. Tanks													
2. TT/TC/Barges													
3. Tankers													
4. Slop Tanks													
5. Oil/Water Separator: Annual Cleaning													
6. Ground-Water Monitoring: Monthly Report													

**Table FRP 8.22  
On-the-Job Training Record**

Type of Training	Training Dates and Number of Hours												Notes
<b>Generator Operation</b>													
1. Pre-Check													
2. Starting													
Recall (Terminal)													
Annual Fire Inspection													
<b>Fire Training Demo</b>													
Fire Department													
Generator Operation													
Security Briefing/Inspection													
CPR/First Aid Training: Video & Brochures													
<b>Hazardous Materials Training</b>													
Hazardous Waste Management EEX													
Hazardous Communications													
<b>Safety</b>													
Company Policy													
VCR Tapes													
Drug/Alcohol Awareness Program													
Railroad Inspection (DOT)													
Fire Training Demo: Fire Department													

**Table FRP 8.23 Personnel Training Record**

<b>Table FRP 8.23</b> <b>Personnel Training Record</b>																	
<b>Date:</b> <span style="border: 1px solid black; display: inline-block; width: 150px; height: 20px; vertical-align: middle;"></span>																	
<b>Attendees:</b>	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr><td style="height: 20px;"></td><td style="height: 20px;"></td><td style="height: 20px;"></td></tr> <tr><td style="height: 20px;"></td><td style="height: 20px;"></td><td style="height: 20px;"></td></tr> <tr><td style="height: 20px;"></td><td style="height: 20px;"></td><td style="height: 20px;"></td></tr> <tr><td style="height: 20px;"></td><td style="height: 20px;"></td><td style="height: 20px;"></td></tr> <tr><td style="height: 20px;"></td><td style="height: 20px;"></td><td style="height: 20px;"></td></tr> </table>																
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	2.																
	3.																
Actions/ Requirements	1.																
	2.																
	3.																
<b>Comments:</b> <div style="border: 1px solid black; height: 40px; margin-top: 5px;"></div>																	
<b>Signature of Responsible Official:</b> <div style="border: 1px solid black; height: 30px; margin-top: 5px;"></div>																	

### 8.3.2 Discharge Prevention Meeting Logs

A record of Discharge Prevention Meetings should be noted on the Discharge Prevention Meeting Record (Table FRP 8.24)

<b>Table FRP 8.24</b>																										
<b>Discharge Prevention Meeting Record</b>																										
<b>Date:</b> <span style="border: 1px solid black; display: inline-block; width: 150px; height: 20px; vertical-align: middle;"></span>																										
<b>Attendees:</b>	<table border="1" style="width: 100%; border-collapse: collapse;"><tr><td style="width: 33%; height: 20px;"></td><td style="width: 33%; height: 20px;"></td><td style="width: 33%; height: 20px;"></td></tr><tr><td style="height: 20px;"></td><td style="height: 20px;"></td><td style="height: 20px;"></td></tr><tr><td style="height: 20px;"></td><td style="height: 20px;"></td><td style="height: 20px;"></td></tr><tr><td style="height: 20px;"></td><td style="height: 20px;"></td><td style="height: 20px;"></td></tr><tr><td style="height: 20px;"></td><td style="height: 20px;"></td><td style="height: 20px;"></td></tr><tr><td style="height: 20px;"></td><td style="height: 20px;"></td><td style="height: 20px;"></td></tr><tr><td style="height: 20px;"></td><td style="height: 20px;"></td><td style="height: 20px;"></td></tr><tr><td style="height: 20px;"></td><td style="height: 20px;"></td><td style="height: 20px;"></td></tr></table>																									
<b>Topic</b>		<b>Description</b>																								
<b>Subjects Discussed</b>	1.																									
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<b>Comments:</b> <div style="border: 1px solid black; height: 40px; margin-top: 5px;"></div>																										
<b>Signature of Responsible Official:</b> <div style="border: 1px solid black; height: 20px; margin-top: 5px;"></div>																										

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### 8.3.3 Drill and Exercise Logs

A record must be maintained for each internal drill, exercise and Area exercise. The following types of information should be included in the Drill and Exercise Log:

Table FRP 8.25 Qualified Individual Notification Drills	
Applicability:	Facility
Frequency:	Quarterly, or routine communication if it occurs on at least a quarterly basis.
Initiating Authority:	IC
Person Responsible for Conducting this Drill:	(Insert the name of the person responsible for conducting this drill here)
Participating Elements:	Facility response personnel, IC, and RIC
Scope:	Exercise communication between the facility personnel and the Facility and Regional Qualified Individuals.
Objectives:	Contact must be made with the IC and the RIC as designated in the response plan.
Certification:	Self-Certification
Verification:	Verification to be accomplished by federal and state regulatory representatives during site visits.
Record Retention:	5 years
Location:	Records must be kept at the facility
Evaluation:	Self-Evaluation
Credit:	The plan holder may take credit for this exercise in the course of conducting routine business or other drills, provided that the objectives of the drill are met and the drill is properly recorded. Similarly, credit may be received for an actual spill response when these objectives are met and a proper record generated.

**Table FRP 8.26  
Spill Response Drill and Exercise Record**

Topic		Information
Date		
Type Drill		
Announced or Unannounced		
Facility Qualified Individual Drill	Contact Method	
	Time of Contact	
	Time of Confirmation	
Regional Qualified Individual Drill	Contact Method	
	Time of Contact	
	Time of Confirmation	
Comments:		
Signature of Responsible Official:		

**Table FRP 8.27  
Spill Management Team Tabletop Exercise**

Applicability:	Facility
Frequency:	Annually
Initiating Authority:	IC
Person Responsible for Conducting this Drill:	(Insert the name of the person responsible for conducting this drill here)
Participating Elements:	Spill Management Team (Incident Response System Management Team — including at a minimum the IC, Deputy IC, Command Staff, and Section Chiefs)
Scope:	Exercise the Spill Management Team's organization, communication, and decision making skills in managing a spill response.
Objectives:	<p>At least one Spill Management Team Tabletop Exercise in a triennial cycle will involve simulation of a worst case discharge scenario.</p> <p>Exercise the Spill Management Team in a review of:</p> <ul style="list-style-type: none"> <li>• Knowledge of the response plan</li> <li>• Proper notification</li> <li>• Communications system</li> <li>• Ability to access the Oil Spill Response Organizations (RIC and any BOA Contractors)</li> <li>• Coordination of organization/agency personnel with responsibility for spill response</li> <li>• Ability to effectively coordinate spill response activity with National Response System infrastructure</li> <li>• Ability to access information in Area Contingency Plan for location of sensitive areas, resources available within the Area, unique conditions of the Area, etc.</li> </ul>
Certification:	Self-Certification
Verification:	Verification to be accomplished by federal and state regulatory representatives during site visits.
Record Retention:	5 years
Location:	Records must be kept at the facility
Evaluation:	Self-Evaluation
Credit:	The plan holder may take credit for this exercise in the course of conducting routine business or other drills, provided that the objectives of the drill are met and the drill is properly recorded. Similarly, credit may be received for an actual spill response when these objectives are met and a proper record generated.

**Table FRP 8.28  
Spill Response Drill and Exercise Record**

Topic		Information	
Date			
Type Drill			
Announced or Unannounced			
Tabletop Exercise	Personnel Involved		
		Basic Scenario	
	Problems Noted		
	Proposed Solutions		
	Comments:		
	Signature of Responsible Official:		

<p align="center"><b>Table FRP 8.29</b> <b>Spill Response Equipment Deployment Drills</b></p>	
Applicability:	Facility with facility-owned (NAS Corpus Christi) response equipment
Frequency:	Semiannually
Initiating Authority:	IC
Person Responsible for Conducting this Drill:	(Insert the name of the person responsible for conducting this drill here)
Participating Elements:	Facility response personnel responsible for logistics and equipment deployment
Scope:	<p>Deploy and operate facility-owned response equipment identified in the response plan. Only a representative sample of each type of equipment or that equipment that is necessary to respond to an average most probable discharge whichever is less, need be deployed. (At least 1000' of each type of boom in the inventory (only 50' of Bottom Seal boom) and one of each type of skimming system must be deployed to receive credit for this drill).</p> <p>The remainder of the equipment which is not deployed must be included in a comprehensive training and maintenance program. Credit will be given for deployment conducted during training. The maintenance program must ensure that the equipment is periodically inspected and maintained in good operating condition in accordance with the manufacturer's recommendations and best commercial practices. All inspection and maintenance must be documented by the owner.</p>
Objectives:	<p>Demonstrate ability of facility personnel to deploy and operate equipment.</p> <p>Ensure response equipment is in proper working order. Dysfunctional response equipment is to be repaired or replaced within 30 days.</p>
Certification:	Self-Certification
Verification:	Verification to be accomplished by federal and state regulatory representatives during site visits.
Record Retention:	5 years
Location:	Records must be kept at the facility
Evaluation:	Self-Evaluation
Credit:	The plan holder may take credit for this exercise in the course of conducting routine business or other drills, provided that the objectives of the drill are met and the drill is properly recorded. Similarly, credit may be received for an actual spill response when these objectives are met and a proper record generated.

**Note:** If a facility with facility-owned equipment also identifies Oil Spill Response Organization (OSRO) equipment in their response plan, the OSRO equipment must also be deployed and operated in accordance with the equipment deployment requirements for OSRO owned equipment. An OSRO that responds to and has equipment pre-staged in various geographic areas is required to conduct Equipment Deployment Drills in each area on an annual basis.

**Table FRP 8.30  
Spill Response Drill and Exercise Record**

Topic		Information
Date		
Type Drill		
Announced or Unannounced		
Equipment Deployment Exercise	On-site or Contractor	
	Equipment Actually Deployed	
		Response Time
	Problems Noted	
	Proposed Solutions	
Comments:		
Signature of Responsible Official:		

<b>Table E 8.31</b> <b>Unannounced Drills</b>	
Applicability:	Response Plan Holders (Facility and Regional) within a COTP Area
Frequency:	Annually  <b>Note:</b> Plan holders are not required to participate in a federal government initiated unannounced drill if they have participated in an unannounced federal or state oil spill response drill within the previous 36 months.
Initiating Authority:	IC, RIC, U.S. Coast Guard, U.S. Environmental Protection Agency, and/or Office of Pipeline Safety
Person Responsible for Conducting this Drill:	(Insert the name of the persons responsible (FIC and RIC) for conducting this drill here)
Participating Elements:	Response Plan Holders
Scope:	Self-initiated: <ul style="list-style-type: none"> <li>• May be any required drill except Notification Drill</li> <li>• Must conduct proper notifications for the scenario</li> <li>• Must involve equipment once every 3 years</li> </ul> USCG/EPA/OPS-initiated <ul style="list-style-type: none"> <li>• A maximum of 4/COTP Zone/EPA Region per year</li> <li>• Will be limited to a maximum of four hours duration.</li> <li>• Will involve response to an average most probable discharge scenario.</li> <li>• Will require proper notifications for the scenario.</li> <li>• Will involve equipment deployment to respond to the spill scenario.</li> <li>• Will not be required for a pipeline by the USCG or EPA since this will be covered by OPS.</li> </ul>
Objective:	Conduct proper notifications to respond to the unannounced scenario of an average most probable discharge and demonstrate that equipment deployment is: <ul style="list-style-type: none"> <li>• Timely</li> <li>• Conducted with adequate amount of equipment for scenario</li> <li>• Properly deployed</li> </ul>
Certification:	Initiating Agency (including IC and RIC)
Verification:	Initiating Agency (including IC and RIC)
	5 years
Location:	Records must be kept at the facility
Evaluation:	Evaluation to be conducted by initiating agency (including IC and RIC).
Credit:	The plan holder may take credit for this exercise in the course of conducting an actual spill response, provided that the objectives of the drill are met and the event is properly recorded.

The initiating agency will provide a record for this drill.

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**TAB 9 — SECURITY**

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## TAB 9 — SECURITY

### 9.0 SECURITY

The below table outlines Security at the NAS Corpus Christi.

<b>Table FRP 9.1</b> <b>Security at Oil Storage/Transfer, Day Tanks</b>		
<b>Security Measures</b>		<b>Location/Description</b>
Base Fencing		All fuel areas on NAS Corpus Christi are in secure areas. A chain-link security perimeter fence encloses the Naval Air Station from the general area. A downscaled security watch monitors and control access to the base at its entrances at all times. Additionally, there is downscaled roving watch.
Storage Facility Fencing		A chain-link security fence surrounds the bulk oil storage tanks and the pump station. Gates that provide entry into the bulk storage area areas are locked when the facilities are not used or attended.
Base Security Patrols		There are 24-hour base security patrols. All entrances to the base are either locked or manned by base security personnel since only authorized personnel or visitors can enter.
Security at Day Tanks		Activity fuel supply officers and personnel responsible for the storage and handling of the fuel provide security for facilities by performing required inspections and locking valves and transfer equipment.
Emergency Cut-off Locations	At Day Tank Locations	Fuel supply officers and activity personnel storing and handling fuel are responsible for securing this area.
Lighting		There is adequate lighting for security purposes throughout the base.
Pipeline Connections		Fuel supply officers and activity personnel storing and handling fuel are responsible for securing these connections.

**Table FRP 9.2**  
**Security at Bulk Oil Transfer Facilities**

Security Measures		Location/Description
Base Fencing		See Table FRP 9.1
		<ul style="list-style-type: none"> <li>Internal security fencing around the FISC tank truck transfer facility provides additional security for the facility.</li> <li>FISC has clearance and escort procedures to control access to these areas.</li> </ul>
Base Security Patrols		See Table FRP 9.1.
Security During Transfers		<ul style="list-style-type: none"> <li>FISC mans and monitors all transfer operations</li> <li>FISC inspects transfer circuit hourly during bulk oil transfer operations.</li> </ul>
Emergency Cut-off Locations	1. Pump Station	<ul style="list-style-type: none"> <li>Access to pump station is controlled by the bulk storage area security fencing and valves are set up on an emergency computer controlled system.</li> <li>The header control valves are locked in the closed position when not in use.</li> </ul>
	2. Bulk Storage Tanks	The storage tank valves are locked in the closed position when not in use
	3. Tank Farm Piping Manifold	<ul style="list-style-type: none"> <li>The manifold is inside the fenced bulk oil storage area.</li> <li>The manifold valves are locked in the closed position when not in use.</li> </ul>
	5. Tank Truck Transfer Facility	Valves at the load rack are locked in the closed position when not in use.
Lighting		There is adequate lighting for the transfer facilities.
Valve Locks		In addition to the valves above, all pipeline drain valves are locked in the closed position.
Pipeline Connections		The transfer hoses are capped when not used.

**Table FRP 9.3  
Security at Bulk Oil Storage Facilities**

<b>Security Measures</b>		<b>Location/Description</b>
Base Fencing		See Table FRP 9.1
Storage Facility Fencing		<ul style="list-style-type: none"> <li>• Internal security fencing around the FISC bulk fuel farm</li> <li>• FISC area has clearance and escort procedures to control access to these areas.</li> </ul>
Base Security Patrols		See Table FRP 9.1.
Emergency Cut-off Locations	Fisc Pump Stations, Storage Tanks, Manifold, and Flow Control Valves	<ul style="list-style-type: none"> <li>• Secured by security fencing around the FISC bulk storage tank farm.</li> <li>• Gates to facility are locked or access is controlled.</li> <li>• Entrances to pump stations are locked during off-duty hours.</li> </ul>
Lighting		There is adequate lighting for the transfer facilities.
Pipeline Connections		The transfer hoses are capped when not used.

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## **TAB 10 — COMMUNICATIONS**

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## TAB 10 — COMMUNICATIONS

### 10.0 COMMUNICATIONS

#### 10.1 Telecommunications: Overview

During an oil or hazardous substance spill, the initial response activities will use telecommunications systems that are currently in place at Navy facilities. If a sustained spill response is required, additional telecommunication systems will need to be mobilized to direct and coordinate cleanup personnel on any terrain affected.

#### 10.2 Communications Resources

For communications resources at NAS Corpus Christi, see Table FRP 10.1.

Table FRP 10.1 Onsite Inventory: Communications Equipment (in Use)						
Type	Assigned to	Call Sign or Phone Number	Primary Network or Frequency	Brand and Model (year, if available)	Charger or Storage Location	OP Status
Hand-Held Radios	Fire Dept: Company Officer			Johnson (20)	Bldg 1742	Operable
	"			GE (15)	NAS Fire Station	Operable
	Environmental Office			Motorola	Bldg 257	Operable
	Warehouse			HT-1000	Bldg 257	Operable
	Haz Waste Manager				Bldg 257	Operable
	Handlers (4 Each)				Bldg 257	Operable
Car/Truck Radios	All Fire Vehicles			Johnson		
Base Station Radios	Fire Station		Corpus	Motorola	Fire Station	Operable
Cellular Phones	Fire Chief	(512) 850-0619	NA	Fujitsu Commander Serial 82BDD29D	DFSP Office	Operable
Other:						
Point of Contact: Terry Boone Day Phone: (512) 939-3776 24-Hour Phone: (512) 939-3776						
Comments: Fire Department has 21 additional radios in use.						
<p><b>WARNING: ONLY "INTRINSICALLY SAFE" HAND-HELD RADIOS AND RECHARGEABLE BATTERY PACKS SHOULD BE USED AT OIL SPILLS. A radio is "intrinsically safe" only if BOTH the radio and battery pack are "intrinsically safe."</b></p> <p>This inventory table functions both as an Onsite Inventory and as part of the Communications Plan.</p> <p>"Intrinsically safe" Motorola hand-held radios and battery packs are marked with green dots on the back, at the junction of the radio body and its battery pack; if BOTH dots are not present, the radio is not "intrinsically safe."</p>						

Last updated: January 1995

<b>Table FRP 10.2</b> <b>Onsite Inventory: Communications Equipment (Stored)</b>						
Type	How Many	Primary Network of Frequency	Brand and Model (year, if available)	Storage Location	Date Last Test	OP Status
Hand-Held Radios	None	--	--	--	--	--
Spare Battery Packs for Hand-Held Radios	None	--	--	--	--	--
Other:	None	--	--	--	--	--
Comments: If it is not known if any extra Communications equipment is stored at NAS Corpus Christi at the other tenant commands.						
<b>WARNING: ONLY "INTRINSICALLY SAFE" HAND-HELD RADIOS AND RECHARGEABLE BATTERY PACKS SHOULD BE USED AT OIL SPILLS. A radio is "intrinsically safe" only if BOTH the radio and battery pack are "intrinsically safe."</b>  "intrinsically safe" Motorola hand-held radios and battery packs are marked with green dots on the back, at the junction of the radio body and its battery pack; if BOTH dots are not present, the radio is not "intrinsically safe."						

Last updated: January 1995

### 10.3 Telecommunications: Spill Response

Initially, response telecommunications will be carried out by response personnel on normal telecommunication channels. If spill response activities reach a point where communication mechanisms are inadequate, the Communications Unit Leader will be responsible for establishing an expanded Incident Command System (ICS) Telecommunications System to support the ICS response organization.

The Response Team will establish an operations center. The Communications Unit Leader and staff at the operations center will report to the Logistics Section Chief, operate the Dispatch Center, and carry out preassigned duties. The staff will be/could be made up of NAS and spill response contractor employees trained and certified to fill the assigned positions and carry out preassigned duties.

As part of establishing the expanded ICS telecommunications system, the Communications Unit Leader will be responsible for developing plans for the effective use of incident telecommunications equipment, supervision of the incident telecommunications center, distribution of telecommunications equipment, and maintenance of the equipment. The Communications Unit Leader will coordinate the use of all communication facilities, activities, and radio frequency usage through a regularly published Incident Radio Telecommunications Plan (see Figure FRP 10.1).

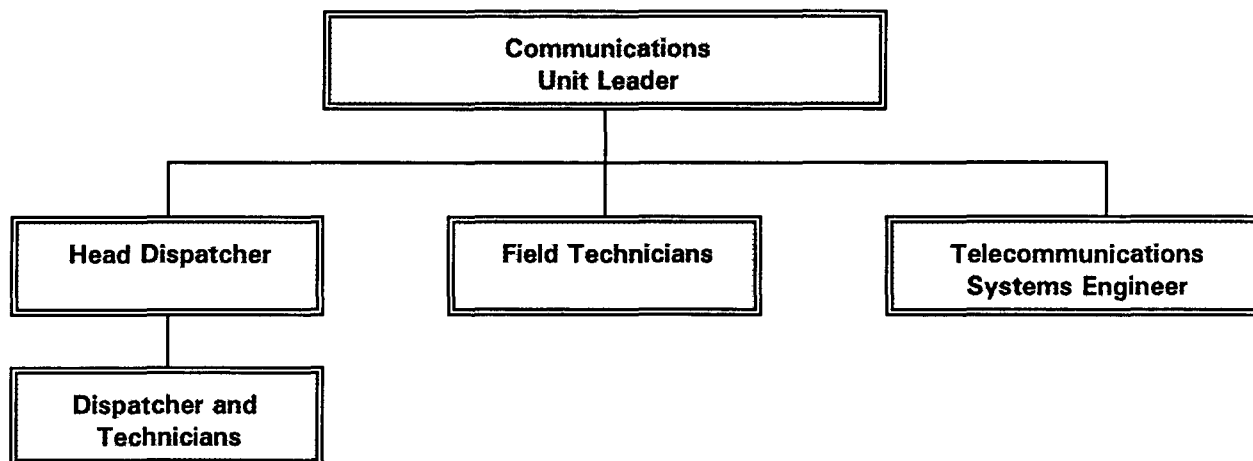
#### Activity Emergency Operations Center

The IC will be responsible for activating the Activity Emergency Operations Center (AEOC). The AEOC will be supported by radio, telephone, data, and fax communications systems in support of cleanup efforts. The Communications Unit Leader will keep the IC updated as to communications capabilities and limitations.

## 10.4 Organization

Response telecommunications will be organized and managed under the ICS. The telecommunications unit is supervised by the Communications Unit Leader who, reports to the Logistics Section Chief. The size and nature of the staff reporting to the Communications Unit Leader will depend on the extent of the response required. A typical telecommunications organizations for a moderate spill incident is shown in Figure FRP 10.1.

**Figure FRP 10.1**  
**Communications Organizations**



**Note:** One individual may fill more than one of these positions.

### Duties

The **Communications Unit Leader** will set up and operate the needed telecommunications systems, order supplemental communications equipment, verify that extended telecommunications equipment has been installed for optimum coverage, activate telephone systems and data networks, and develop the Incident Radio Communications Plans for each operational period.

Under the direction of the Communications Unit Leader, the **Head Dispatcher** will supervise the telecommunications center, set shift hours, verify that dispatchers have needed materials, and prepare daily unit logs for documentation.

**Spill Response Dispatchers** receive and transmit radio and telephone message traffic in support of incident personnel and agencies external to the incident, provide dispatch services, and maintain 24 hour radio logs for documentation. The message center dispatcher receives, records, and routes information concerning critical oil spill tactical activities. Runners may distribute hard copy materials to ICS staff members. Typically an operations and a logistics dispatcher will be on duty. Radio operators in the field will communicate information from specific sites or operations directly to the AEOC via the dispatch center.

Table FRP 10.3 Incident Radio Communications Plan			
Incident Name	Date Prepared	Time Prepared	Operational Period (Date/Time)
			/
Basic Radio Channel Utilization			
Assignment			
Channel			
Function			
Frequency			
System/Cache			
Remarks			

Prepared By (Communications Unit)

The telecommunications **Technical Supervisor** oversees the installation of all communication systems required by the Communications Unit Leader. Telecommunication technicians will verify that incident telecommunication radio and telephone systems are operable (install repeaters, antennas, receivers, etc.), maintain an inventory of telecommunication equipment, distribute and recover equipment and resources, and service communications equipment.

The telecommunications **System Engineer** is responsible for planning the technical aspects of the field support telecommunication systems. This engineer also serves as the alternate communications unit leader.

### Training and Certification

Persons assigned to telecommunication roles within the ICS response organization will be given ICS training with the objective of certifying them for their preassigned telecommunications duties. Telecommunication positions within the ICS structure will usually be filled by personnel with professional technical communications experience. This core staff will be supplemented by contractor personnel as needed.

### Incident Radio Telecommunications Plan

Communications during a spill response will be managed through the use of a common telecommunications plan. An example of an Incident Radio Telecommunications Plan can be found in Table FRP 10.3. Before each daily briefing, the Communications Unit Leader will prepare this plan, which will be reviewed and distributed to ICS unit leaders.

Under the ICS, the Communications Unit Leader assigns telecommunications according to function and situational demands. They are typically broken into four main networks and as many subgroups as needed for expansion. Radio nets for moderate incidents will normally be organized as indicated below.

## **Command Network**

The command net has the highest priority and almost always employs duplex VHF frequencies. This net will link together the IC, key staff members, section chiefs, and division and group supervisors. This net is monitored by the AEOC tactical dispatcher and is the designated incident emergency frequency.

## **Tactical Networks**

There may be several tactical nets, based on the size and nature of the spill. They may be established around agencies, departments, geographical areas, or specific functions as determined by the Communications Unit Leader and identified operational needs.

## **Logistical Network**

The logistical net will be used to order and transport resources and to efficiently control all support functions. It is monitored by the AEOC. It can be either duplex or simplex, VHF or UHF, depending on terrain and usage.

All logistics communications will be conducted on dedicated logistics channels to prevent impacting operations. Logistics traffic will be routed through the logistics dispatcher in the AEOC for accountability and tracking. Early in the incident, support communication's nets will be established for logistics functions such as ground support, ordering, procurement, and supply. A general telecommunications net may be established for nontactical communications between various elements of the ICS team.

## **Air Operations Network**

The Air Operations Section works under the control of the Operations Section Chief but has its own set of frequencies due to the nature of aircraft radios and the different environment. These nets are used for local traffic control, flight following, and onsite air-to-air and air-to-ground telecommunications. This net may be monitored by the AEOC.

Air operations are used for surveillance, tactical operations, and logistics. Communications are required for flight following and air traffic control, and for transmittal of spill-related information.

**Aerial surveillance** is one of the key tools used to track spill location and to plan response activities. Surveillance operations will be done primarily by helicopter but may also utilize fixed-wing aircraft. Communications between the surveillance aircraft and AEOC and ground crews will be by VHF radio usually on VHF Marine frequencies. Communications between aircraft and response vehicles and vessels will be by VHF radio.

**Flight following** position reports would be relayed every 15 minutes to Air Traffic Control for the full duration of all flights. This will be accomplished on aircraft radio dedicated to emergency spill operations.

If operations require a **tactical flight**, such as an ADDSPAC mission, normal flight-following rules are to be followed. If warranted, a Tactical Air Coordinator will control on-scene aircraft during response operations via predesignated air-to-air frequencies. All tactical aircraft will be made aware of operational frequencies before they enter the restricted air space that may exist around a spill site.

The aircraft in the area will contact the air operations controller on the aviation contact frequency and then announce its location, altitude, and intentions to other aircraft on the air-to-air frequency.

**Logistical flights** for air transport of personnel and equipment will be made in accordance with flight following rules. Pilots will make themselves aware of current operating air-to-air and air-to-ground frequencies before entering restricted air space over the spill.

All logistical flights will be scheduled through the Air Branch Director located at the AEOC. Before any logistical flight, the pilots will be briefed as to the nature of the mission, coordinates, and current traffic control, flight following, air-to-air, and air-to-ground frequencies. Upon arriving in the area the pilot will announce his location, altitude, and intentions on the on-scene air-to-air aircraft frequency and monitor this frequency for other air traffic. Upon arriving at his destination, the pilot will call the local controller on the established frequency. When departing the area, the pilot will announce his intentions for flight following and continue to monitor air-to-air frequency for local traffic.

**Air Traffic Control** (on-scene air traffic safety) will be maintained over a common traffic advisory frequency (CTAF). Pilots shall give periodic position reports, monitor the appropriately designated frequency for advisories, and establish visual contact with and separation from other traffic. All flights shall be conducted in accordance with any NOTAM published under FAR 91.100. Operations at airports with a tower will use frequencies assigned by the Federal Aviation Administration (FAA) to that tower.

### **Medical Emergency**

In a medical emergency, initial request and response will be initiated via telephone or radio. If an airborne medivac is needed, the aircraft will use standard aircraft frequencies.

### **Telecommunications: Systems and Equipment**

This section describes oil spill response telecommunications equipment currently in place or in stock for emergency use.

Systems traversing public facilities may be leased, full-time circuits between fixed points. Others may be established as required by dialing through the Public Switched Telephone Network (PSTN). Relying upon switched telephone telecommunications to support information transfer needs during an emergency is not a viable practice, since there is no way to ensure that adequate circuits will be immediately available in the PSTN to support telecommunications needs. For this reason, NAS Corpus Christi relies heavily upon private and autovon circuits and facilities to support both the operational and contingency communications missions.

### **Radio Systems**

Radio telecommunications are those involving transmissions between multiple mobile radio stations or between a radio base station and a mobile unit regardless of whether the base station is directly or remotely controlled by the dispatcher. Such facilities operate in the Maritime, Aviation, and Land Mobile Services as specifically licensed by the Federal Communications Commission.

**Mobile radios** are simplex standard series hand-held and base station VHF units with code cards or marine VHF hand-held units supported by a base station.

## **Supplementary Systems**

The fixed-radio telecommunication facilities are adequate to meet the message traffic needs associated with day-to-day spill prevention. A sustained response, however, would require additional radio sites. The initial requirement would arise as a result of the need to support field activities of increasing magnitude while continuing to conduct daily routine operations. Additional radio channels will therefore have to be implemented to fulfill the communication needs for expanded response crews. The requirement for additional transmission sites, especially in the early stages of a response, will arise not so much from the need to increase coverage area as from the frequency allocation structure, wherein many stations transmitting simultaneously at a single location will tend to create intolerable interchannel interference. This constraint requires that any system engineered to supplement the in-place telecommunications system be extremely flexible.

To provide optimum flexibility to adapt to evolving telecommunications requirements in a spill and to furnish dedicated interagency telephone communications that cannot be impacted by switched network traffic patterns, long-term communications support may be accomplished using Navy Supervisor of Salvage equipment that is specifically designed to support spill response operations.

### **10.5 Telecommunications: Logistics**

#### **Maintenance**

Field maintenance of all telecommunications equipment is routinely performed by qualified personnel. Biannual checks and quick response spot checks are also performed.

#### **Mobilization**

If a spill occurs, pre-positioned contingency telecommunications equipment will be located and activated on order from the ICS Communications Unit Leader.

#### **Telecommunications: Government Agencies**

If a spill occurs, government agencies at various levels will be contacted, as dictated by the nature and extent of the spill. Phone numbers for these and other agencies are listed in the Emergency Telephone List (ERAP, Tab B, Table ERAP B.1).

If the magnitude of the incident makes it necessary for these agencies to station personnel onsite, communications links and equipment will be provided as needed.

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**TAB 11 — SITE-SPECIFIC HEALTH AND SAFETY PLAN**

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## **11.0 SITE-SPECIFIC HEALTH AND SAFETY PLAN**

Each Oil and Hazardous Substance Spill Response Plan must have a site-specific health and safety plan (HASP) that complies with the requirements of 29 CFR 1910.120. This site-specific plan should be able to be modified to become incident-specific. The following sample site-specific HASP can be used to develop a site- or incident-specific HASP.

The safety and security of response and support personnel and others involved in an emergency response are the primary concerns. This section provides a general framework for the protecting oil spill response. The information in the health and safety section is intended for use as a guide by the Safety Officer to prepare and implement worker health and safety protection measures to maximize safety and allow critical oil spill response activities to proceed. Specific site control and emergency response procedures will need to be developed using forms provided in this outline or other forms developed by the activity. Other procedures for activities such as confined space entry or hot work will require additional controls in order to fulfill the regulatory requirements. These and other health, safety, and regulatory matters must be identified by the Safety Officer. Once these are identified, the Safety Officer will then need to take appropriate action to address those safety issues or regulatory requirements.

### **Medical Monitoring**

All persons who will be exposed or will have the potential to be exposed to hazardous substances will take part in a medical monitoring program that meets the requirements of 29 CFR 1910.120(f). In general, medical monitoring will be conducted for workers as follows:

- Workers who have the potential to be exposed to hazardous substances at or above the Permissible Exposure Limit (PEL).
- Workers whose duties require them to wear a respirator for more than 30 days/year.
- Workers who are believed to have been exposed to hazardous substances or who exhibit symptoms of exposure.

### **Records and Reports**

Both state and federal regulations require employers to prepare and maintain records of occupational injuries and illnesses.

### **Health Hazards**

Health hazards must be identified in the site-specific HASP. The following lists typical hazards that should be addressed during an oil spill response. A similar list should be developed for hazardous substances stored at NAS Corpus Christi.

## Primary Chemical Hazards

Table FRP 11.1 lists typical petroleum products that are transported to and used at NAS Corpus Christi.

<b>Table FRP 11.1</b> <b>Permissible Exposure Limits of OPA 90 Products Stored or Used By NAS Corpus Christi</b>		
<b>Product</b>	<b>TWA</b> <b>(Time Weighted Average)</b> <b>(in ppm)</b>	<b>STEL</b> <b>(Short Term Exposure</b> <b>Limit)</b> <b>(in ppm)</b>
JP-4 (jet fuel)	10	15
JP-5 (jet fuel)	10	15
JP-8 (jet fuel)	100	--
DFO (diesel)	500	--
MUM (unleaded gasoline)	300	500
ASA-3 (anti-static compound)	100	--

**Note:**

ppm = parts per million

The MSDSs for diesel fuel may be found at the end of this section.

### **JP-4 (jet fuel)**

JP-4 is a complex mixture of hydrocarbons containing benzene (up to approximately 2%). Chronic exposure to high concentrations of benzene has been shown to cause cancer (leukemia) in humans and to have other adverse blood effects (anemia). Benzene is considered a human carcinogen.

Aspirating this product into the lungs can cause chemical pneumonia and can be fatal.

### **JP-5 (jet fuel)**

JP-5 is a mixture of light hydrocarbons and naphthalene. Naphthalene is a potential irritant to eyes, skin, and lungs and may cause changes to the blood, eyes, and kidney after prolonged or repeated exposure.

Aspirating this product into the lungs can cause chemical pneumonia and can be fatal.

### **JP-8 (jet fuel)**

JP-8 is a mixture of hydrotreated light petroleum distillates, antioxidant, anti-static, corrosion inhibitor, and metal deactivator. Health studies have shown that petroleum hydrocarbons pose potential human health risks which may vary from person to person. As a precaution, exposure to liquids, vapors, mists, or fumes should be minimized.

Exposures to high concentrations may cause headaches, dizziness, anesthesia, drowsiness, unconsciousness, and other central nervous system effects, including death.

### **Diesel Fuel**

Aspirating liquid into the lungs may cause extensive pulmonary edema (dry land drowning). Prolonged or repeated skin contact will remove skin oils, leading to irritation and/or dermatitis. High vapor concentrations are irritating to the eyes and lungs, and may cause headaches, dizziness, and unconsciousness.

### **Gasoline (unleaded)**

Gasoline is a mixture of hydrocarbons, including aliphatic hydrocarbons, aromatic hydrocarbons, a variety of branched and unsaturated hydrocarbons, and additives. Extremely high concentrations of exposure could produce conditions such as dizziness, coma, collapse, and death. Exposure to nonlethal doses is usually followed by complete recovery, although cases of permanent brain damage following massive exposure have been reported.

### **Secondary Chemical Hazard Identification**

Oil and hazardous substance spill responses require the use of a wide variety of chemicals and materials which may singularly or in conjunction with the site work conditions create various hazards to site workers. Several of these hazards are identified in the following table.

<p align="center"><b>Table FRP 11.2</b> <b>Secondary Chemical Hazards</b></p>		
<b>Hazard Description</b>	<b>Recommended Protective Equipment</b>	<b>Conditions Under Which Exposure May Occur</b>
<b>Diesel and Gasoline Engine Exhaust</b> — Exposure to diesel or engine exhaust may promote inhalation of hydrocarbons, carbon monoxide, and particulates. Exposure may irritate eyes and mucous membranes.	Monitor Carbon monoxide (CO) and dioxide (CO <sub>2</sub> ) levels, ventilate area, and use half-mask respirator with organic and particulate filters.	Diesel and gasoline exhaust exposure may occur in poorly ventilated areas near diesel equipment. It may also occur in sheltered outdoor areas on calm days or during temperature inversions.
<b>Low Oxygen Concentrations</b> — Confined or restricted space atmospheres may be dangerous to life and health if O <sub>2</sub> concentrations are below 19.5% (oxygen deficient) or greater than 25% (oxygen enriched).	Monitor O <sub>2</sub> levels and ventilate area. Do not enter O <sub>2</sub> deficient atmosphere without a confined space entry permit and supervision from the Safety Officer. Supplied-air PPE is required. Safe O <sub>2</sub> levels 19.5%-23%.	Exposure may occur in poorly ventilated areas near oxygen-consuming materials or equipment. This includes waste undergoing biological degradation or fuel-powered equipment and confined or restricted spaces (e.g., tanks).
<b>High Carbon Monoxide Concentrations</b> — Is a colorless and odorless gas, slightly less dense than air and is toxic by inhalation. Carbon monoxide is also highly flammable (Lower Explosive Limit [LEL] = 12%; Upper Explosive Limit [UEL] = 75% by volume in air).	Monitor CO, and ventilate area. Use of supplied air PPE is required. Do not enter high CO atmosphere without a confined space entry permit and supervision from Safety Officer. Safe CO concentrations are less than 50 ppm time weighted average (TWA).	Exposure may occur in poorly ventilated areas near internal-combustion engines. Acetylene welding, industrial heating equipment and processes involving incomplete combustion may also create this hazard.
<b>Other Spill Response Specialty Agents</b> — Due to the varied nature of oil spill cleanup operations, numerous specialty chemicals in solid, liquid, and gaseous phases may be used or stored in work areas.	Obtain and review MSDSs for all products. Verify safety precautions and PPE needs. Obtain any required respirator, skin, eye, and splash protection.	Exposure to these materials in poorly ventilated areas or in open areas may occur if workers are unaware of the chemicals' toxic or physical properties.
<b>Particulates</b> — Particulates may irritate lungs, eyes, and mucous membranes. Particulates may also have toxic effects (e.g., lead, asbestos, cadmium, and silica).	Use half-mask respirator with particulate filter and appropriate cartridges. Use other PPE for eye and skin protection as needed.	Use of powdered or granular oil absorbent (vermiculite, diatomaceous earth, etc.) or other specialty products may cause particles become airborne and enter the breathing zone of personnel. Wind-carried silt and other dusts may also be a factor.
<b>Biological Nutrients</b> — Inhalation of vapors, mists, and particulates or skin contact with nutrients used for biological treatment may irritate lungs, eyes, and mucous membranes. Dermal absorption is also possible.	Obtain and review MSDS for the specific product. Verify safety precautions and PPE needs. Obtain required respirator, skin, eye, and splash protection.	Use of nutrients (fertilizers) in a spill cleanup effort may create potential exposures during spray application or other distribution and mixing processes.
<b>Dispersant</b> — Inhalation of vapors or mists or skin contact may irritate lungs, eyes, and mucous membranes. Dermal absorption is also possible.	Obtain and review MSDS for specific product. Personnel involved in handling or applying dispersant will be provided specific training.	Application of dispersant during the initial spill may expose workers to respiratory and dermal hazards.

Table FRP 11.2 Secondary Chemical Hazards		
Hazard Description	Recommended Protective Equipment	Conditions Under Which Exposure May Occur
<b>Confined Spaces</b> — Inadequate ventilation, coupled with limited egress, creates potentially hazardous situation for workers. Oxygen-deficient, toxic, or flammable atmospheres may exist in these areas. All OSHA procedures regarding confined space entry will be followed.	Monitor CO, O <sub>2</sub> , toxic, and flammable gas concentrations, and ventilate area. Do not enter a confined space without a confined space entry permit and supervision from the Safety Officer. Safe O <sub>2</sub> levels = 19.5% to 25%; flammable gas limits = less than 10% LEL; toxic limits = less than ½ PEL or Threshold Limit Value (TLV) whichever is the lower value.	Confined spaces may be encountered on vessels, inside tanks, inside buildings, on drill rigs, in sumps, in ditches, etc. Product vapors or other emissions resulting from response operations may intensify this hazard.
<b>Flammable Atmosphere</b> — A flammable gas, vapor, mist, or dust, when mixed with air, may create a flammable or explosive condition. Volatile vapors or gases will generally be of a sufficient quantity during the initial few hours of a spill to cause a flammable atmosphere.	Conduct flammable gas and oxygen monitoring prior to starting any work. Atmosphere should be purged or rendered inert when possible. Obtain hot work permits before to starting any cutting or welding. Safe flammable limits are less than 10% of the LEL.	Flammable conditions may exist during the initial phase of a spill or at any time in areas where flammable dusts or vapors may concentrate. Holds of vessels and fueling areas are prime locations to find flammable atmospheres.

Subjecting response personnel to the hazards identified above can be avoided through the use of the proper PPE and through proper monitoring and supervision by health and safety personnel. The following paragraphs briefly discuss proper procedures associated with some of the secondary hazards.

### Hazardous Conditions

The hazards associated with the contaminants listed in the above table are best controlled through early detection, use of PPE, implementation of engineering controls, or by avoiding the hazard. Early detection can be accomplished by using common sense and understanding the Health and Safety Plan.

### Confined Space Entry

Entry into confined spaces (spaces with restricted egress and potentially hazardous atmospheres) will be directly supervised by the Safety Officer through the use of a confined space entry permit. Confined spaces may be oxygen deficient or have flammable or toxic atmospheres. Confined space entry will be permitted only if the parameters listed in the above table are within acceptable limits.

### Physical Hazards

Physical hazards associated with oil spill cleanup operations are varied and the associated hazards depend upon the site-specific conditions, cleanup operations, and the type of equipment being used. Severe environmental and weather conditions, complex transportation and logistical requirements, long work hours, and intensive labor needs contribute to the high susceptibility of oil spill workers to physical hazards. The following table summarizes some of the physical hazards associated with spill cleanup operations.

<b>Table FRP 11.3</b> <b>General Physical Hazards</b>		
<b>Hazard Description</b>	<b>Hazard Treatment Guidance</b>	<b>Hazard Abatement Technique</b>
<b>Slip, Trip, Fall</b> — Oil spill responders work in places where poor footing and lighting creates slip, trip, and fall hazards.	Survey responders for possible unknown injuries. If injured, treat with first aid and seek medical attention.	Provide proper illumination in work areas. Keep work areas free of excess clutter. Move cautiously in work areas and use non-slip soles on footwear. Attempt to recognize and avoid or control hazards in the work area. Conduct hazard awareness briefings.
<b>Back Injuries</b> — The requirement to mobilize and use great quantities of equipment during the oil spill response creates high probability of back injuries. Slips, trips, and falls contribute to back injuries.	Remove worker from the work area to prevent further stress on his/her back. If necessary, stabilize the victim in a prone position with a backboard to prevent additional injury. Seek medical attention.	Lift objects correctly. Obtain assistance from co-workers. Use mechanical devices to reduce lifting effort. Do back and stretching exercises before lifting objects. Bend the legs when lifting instead of bending from the waist.
<b>Eye Injuries</b> — An oil spill response may expose workers to numerous eye hazards, including those resulting from chemical exposure, equipment hazards, open flames, and impacts from particulates or other foreign bodies.	If chemicals have contacted a worker's eye, flush with water immediately. If particulate is in the eye, flush eye with water. If an object is imbedded in the eye, do not attempt to remove it. Cover the affected eye to prevent further irritation and seek medical assistance.	Use appropriate eye protection such as safety glasses, goggles, and face shields. Avoid exposure to vapors, mists, fumes, and dusts.
<b>Handling of Hand Tools and Spill Response Equipment</b> — Tools used in cleanup operations such as shovels, picks, axes, etc., can injure adjacent workers if adequate distance is not maintained. Improper use of tools may also cause back injuries. Sorbents, containment booms, and waste materials can be heavy and awkward and handling and moving them may cause back injuries.	If injured, treat with first aid and seek medical assistance.	Team leaders must provide orientation for workers to familiarize them with the equipment being used. Use hand tools in a manner that will limit physical stress. Take frequent breaks to limit fatigue. Allow water to drain or remove ice from equipment before moving it. Use mechanical devices to handle heavy materials.
<b>In Situ Burning</b> — In situ burning will present physical fire hazards as well as particulate hazards, visibility problems, and heated gas hazards resulting from the combustion of oil and oily debris.	Determine weather conditions and select escape route from plume of burn area. Contact other vessels for assistance and exit burn area as rapidly as possible.	Adhere to burn safety plans, obtain frequent weather forecasts, and stay upwind. Refer to tide and current predictions to assist in burn area avoidance.

<b>Table FRP 11.3</b> <b>General Physical Hazards</b>		
<b>Hazard Description</b>	<b>Hazard Treatment Guidance</b>	<b>Hazard Abatement Technique</b>
<b>Hypothermia</b> — Hypothermia is the lowering of the body temperature resulting from exposure to the elements. Hypothermia will induce death if not treated properly. Symptoms include shivering, loss of lucidity, loss of coordination, confusion, and cold skin temperature. Hypothermia will occur rapidly when immersed in cold water.	Prevent additional heat loss and warm victim by any means available. Remove any wet clothing; add heat by placing warm items next to the victim's body. Do not give alcoholic beverages to victim. Seek medical assistance.	Hypothermia can be avoided by dressing appropriately for weather conditions and regulating body temperature during work activities. Establishing a system to visually monitor workers for hypothermia warning signs will assist early detection. Avoid situation where clothes become wet such as from rain or ocean spray. Avoid excess heat loss through wind exposure.
<b>Frostbite</b> — Frostbite may occur when workers are exposed to subfreezing weather conditions and improperly protected from the cold. Frostbite may affect exposed flesh or nonexposed body parts which transfer heat at rates sufficient to cause freezing.	Seek medical attention at once. Frostbitten skin will appear white or light colored and may feel cold and solid. Thaw out body parts with warm water or by applying firm steady pressure with a warm body part. Do not thaw body parts unless they can be maintained at a warm temperature afterward.	Carefully monitor weather to allow time for work crews to prepare for forecasted cold weather. Workers should eat high-energy foods, keep clothing dry, bring extra dry clothing, and test for extremity circulation regularly.
<b>Noise Injuries</b> — Sound sources that generate noise greater than 85 decibels include aircraft, outboard engines, generators, compressors, heaters, and heavy equipment. Noises that are greater than 85 decibels may permanently damage hearing.	Monitor noise levels. Remove affected worker from duties that with high noise exposure potential. Provide worker with additional hearing protection equipment. Seek medical assistance as necessary.	Workers should use ear protection equipment or avoid high noise areas.
<b>Site Illumination</b> — Response operations during poor visibility or darkness may create dangerous or unhealthy conditions for response workers.	Provide substantial amounts of lighting and generator equipment. Personal headlamps and vehicle lighting may be used as a supplement.	Provide adequate lighting. Use headlamps, portable lighting, and equipment lights to illuminate work sites.
<b>Specialty or Heavy Equipment</b> — Mechanical equipment may have exposed moving parts, generate heat capable of causing burns, or generate high-pressure liquids or gases which may injure workers. Movement of heavy equipment may injure personnel.	Perform first aid; seek medical attention immediately.	Read all operating manuals. Be aware of any moving parts which may cause injury. Avoid direct exposure to heat or pressure generated by equipment. Wear appropriate PPE to limit possible injury. Install backup alarms on heavy equipment. Ensure all guards are in place.

<b>Table FRP 11.3</b> <b>General Physical Hazards</b>		
<b>Hazard Description</b>	<b>Hazard Treatment Guidance</b>	<b>Hazard Abatement Technique</b>
<b>Vehicle, Aircraft, or Vessel Accidents</b> — Response efforts may require response personnel to travel by various modes of transportation. The emergency nature of the response may expose workers to marginally safe traveling conditions.	Be aware of your position at all times and know the locations of safe refuges along your intended travel route. Notify the Incident Command Post if an accident occurs and what assistance is required.	During all vehicle, aircraft, or vessel travel, workers will adhere to all established travel safety procedures. This includes fastening seat belts, maintaining communications, and wearing or having easy access to safety equipment such as life vests and survival gear.
<b>Heat Stress</b> — Heat stress may occur when a worker is exposed to elevated temperatures. Examples of when this may occur include a worker suited in protective clothing that limits cooling and a worker subjected to high ambient temperatures.	Move victim to cool, shaded location. Cool victim quickly by wrapping in wet towels. Treat victim for shock. Seek medical assistance immediately.	Heat stress may be avoided by taking frequent breaks to cool down and consuming large amounts of liquids. PPE can be fitted with cooling equipment. Ventilation may be used to assist with cooling. New site workers must acclimate themselves to the site conditions.
<b>Worker Exhaustion</b> — Spill response activities often involve strenuous tasks and long work hours. Symptoms of exhaustion include loss of concentration, increased frequency of trips, falls, and slips, and worker complaints of cramping and pain. Work exhaustion often manifests itself in other hazards, such as accidents and back injuries.	Supervisors must closely observe workers for signs of exhaustion. Once an exhausted worker is identified, he shall be assigned to a less stressful task or removed from labor duties entirely until recovered. Seek medical assistance as necessary.	Close observation by supervisors and use of the buddy system will be used to detect and prevent worker exhaustion. Frequent breaks along with consumption of high-energy foods and liquids will also decrease the likelihood of exhaustion.
<b>Wildlife</b> — Spill workers may encounter a wide variety of wildlife during response activities. Some of the wildlife may be capable of inflicting injuries to or killing response personnel.	Treat injuries with standard first-aid methods. Treat victim for shock. Seek medical assistance as necessary.	Wildlife protection procedures will be established for each specific spill event.
<b>Weather</b> — Sudden changes in weather may jeopardize the safety of responders. Hurricanes, high winds, dramatic temperature changes, thunder-storms, or fog can all pose a serious threat.	If caught in severe weather, consider options carefully. Evacuation of work site may be necessary.	Obtain daily weather forecasts and updates as available. Plan work site evacuation routes for worst-case scenarios. Workers should bring extra clothing and emergency survival gear. Communications with the Incident Command Center must be maintained to coordinate evacuation or to receive support.

Table FRP 11.3 General Physical Hazards		
Hazard Description	Hazard Treatment Guidance	Hazard Abatement Technique
<b>Electric Shock</b> — Electric equipment operated at greater than 12 volts, used inlet or conductive areas, or damaged equipment can produce a severe electrical shock.	Remove victim from contact with energized parts. Administer cardiopulmonary resuscitation (CPR) and first-aid as necessary. Obtain medical assistance.	Use intrinsically safe equipment or ground fault interrupter circuits to prevent shock.

### Initial Response Actions

### Initial Site Assessment

An Initial Site Assessment Form, such as Table FRP 11.4, should be used by the Initial Incident Commander to determine the hazards at the spill site. This assessment must be made before any response effort can be undertaken. When the response effort is to be initiated, an Initial Site Safety Plan, similar to Table FRP 11.5, should be used to identify the spilled substance, the level of PPE needed, type of monitoring to be used, and other pertinent response information.

### Site Security

The Initial Incident Commander must evaluate the seriousness of the situation and determine the level of health or safety risk to response personnel or the public in general and notify the IC as soon as possible. If the situation requires security, local military police should be contacted. Local law enforcement officials should also be contacted for evacuations, establishing road blocks, and limiting access to response areas.

### Surface Terrain and Meteorology

The direction and velocity of prevailing winds and the proximity of the spill to possible sources of ignition, such as running equipment, must be immediately addressed. All potential ignition sources must be kept upwind of the spill or secured immediately. Some flammable vapors may be heavier than air and travel for long distances along the surface or settle in low-lying areas.

### Atmospheric Testing

A hazard evaluation procedure must be established and implemented by a trained individual in order to establish safe work practices, level of PPE, and other control procedures before any personnel are committed to spill response activities. At a minimum, the flammability of the vapors and the oxygen concentrations must be evaluated throughout the spill site. These concentrations should continue to be evaluated periodically throughout the work shift to detect changes in airborne hazards that may result from response activities or changing weather conditions.

<b>Table FRP 11.4</b> <b>Initial Site Assessment Form</b> [to be completed by the Initial Incident Commander before initiating immediate response]		
Date	DD      MM      YY	
Initial Incident Commander		
1. Wind Direction	Toward your position <input type="checkbox"/> Away from your position <input type="checkbox"/>	
2. Are people injured/endangered?	<input type="checkbox"/> Yes <input type="checkbox"/> No	
3. Are non-NAS Corpus Christi persons observing the incident?	<input type="checkbox"/> Yes <input type="checkbox"/> No	
4. Are persons involved in rescue attempts?	<input type="checkbox"/> Yes <input type="checkbox"/> No	
5. Are there any signs of potential hazards from:	Electrical lines down or overhead ?	<input type="checkbox"/> Yes <input type="checkbox"/> No
	Unidentified liquids or solids?	<input type="checkbox"/> Yes <input type="checkbox"/> No
	Visible vapors?	<input type="checkbox"/> Yes <input type="checkbox"/> No
	Unusual smells or odors?	<input type="checkbox"/> Yes <input type="checkbox"/> No
	Fire or sparks from nearby ignition sources?	<input type="checkbox"/> Yes <input type="checkbox"/> No
	Holes, caverns, deep ditches, fast-moving water, or cliffs nearby?	<input type="checkbox"/> Yes <input type="checkbox"/> No
	Local vehicular or pedestrian traffic?	<input type="checkbox"/> Yes <input type="checkbox"/> No
	Warning placards, color-coded placards, or danger signs?	<input type="checkbox"/> Yes <input type="checkbox"/> No
	Is the ground dry?	<input type="checkbox"/> Yes <input type="checkbox"/> No
	Is the ground wet?	<input type="checkbox"/> Yes <input type="checkbox"/> No
	Is the ground icy?	<input type="checkbox"/> Yes <input type="checkbox"/> No
Other		
6. Make and initial assessment of the flammability of vapors and the level of oxygen present.	% LEL -	
	% O <sub>2</sub> -	
7. Approach the spill site from the upwind side and observe any change in the status of any of the above items.	Item Number	Change Observed
8. Is the incident scene secure?	<input type="checkbox"/> Yes <input type="checkbox"/> No	
9. Is there a need for the additional support/equipment?	Security	
	Personal Protective Equipment	
	Hazardous Materials Technician/Specialists (identification/monitoring/source control)	
	Sites for Command Center & Decontamination Station	
	Equipment needed to control spill	
	Other	

<b>Table FRP 11.5</b> <b>Initial Site Safety Plan</b>			
Date		<div style="border-bottom: 1px solid black; width: 100%;"></div> <div style="display: flex; justify-content: space-around; font-size: small;"> <span>DD</span> <span>MM</span> <span>YY</span> </div>	
1. Review the Initial Site Assessment Form		Completed <input type="checkbox"/> Yes <input type="checkbox"/> No	
2. Map (sketch) of Site w/Present Wind Direction and at Least Two Major Landmarks Completed <input type="checkbox"/> Yes <input type="checkbox"/> No			
3. Identification of all potentially harmful substances at scene (a)			
Substance	Container	Secured -	
		<input type="checkbox"/> Yes	<input type="checkbox"/> No
		<input type="checkbox"/> Yes	<input type="checkbox"/> No
		<input type="checkbox"/> Yes	<input type="checkbox"/> No
4. Personal Protective Equipment Required (a)			
Respiratory Protection Required		<input type="checkbox"/> Yes <input type="checkbox"/> No  If yes, type of respiratory protection:	
Protective Clothing Required		<input type="checkbox"/> Yes <input type="checkbox"/> No  If yes, describe the type and level of protection in detail:	
5. Establish a monitoring System (a)		Describe monitor program (including instruments to be used).	
6. Is a vehicle involved?		<input type="checkbox"/> Yes <input type="checkbox"/> No	
<div style="display: flex; justify-content: space-between;"> <div style="width: 45%;">                         Driver's Name: _____                           Vehicle Number: _____                           Railcar Number: _____                           Ship Name and Number: _____                           Other Hazard Identification Information: _____                     </div> <div style="width: 45%;">                         Driver's License Number: _____                           Tractor/Trailer Number: _____                           Cargo Tank Number (Tank Truck): _____                           Placard(s): _____                     </div> </div>			
7. General Information			
Carrier Name _____		Telephone Number: _____	
Manufacturer of Substance _____		Telephone Number: _____	
Point of Origin (Shipper): _____		Destination (Consignee): _____	
8. Determine degree of decontamination required and designate a decontamination area. (a)			
9. Establish an isolation zone and notify area residents if necessary (e.g., threat of fire or explosion).			
10. Begin control, containment, cleanup, decontamination, and disposal process.			

**Note:** (a) Items to be completed by a qualified HazMat Technician or Specialist  
 File initial report at this time using available help. Call for medical assistance as required.

## **NAS Corpus Christi Safety and Health Program**

Each NAS Corpus Christi activity must develop and implement a written safety and health program for all Navy response personnel. This program is designed to identify, evaluate, and control safety and health hazards, and provide for emergency response during oil and hazardous substance spill response operations. The written safety and health program includes the following:

- The NAS Corpus Christi response organization
- A generic safety and health plan
- The Navy training program
- A description of the Navy medical surveillance program

The Navy written safety and health program should be made available to any contractors or subcontractors (or their representatives) who will be involved in spill response operations; to Navy employees; to Navy employee-designated representatives; to OSHA personnel and; to personnel of other federal, state, or local agencies with regulatory authority over the spill response.

### **Site-Specific Safety and Health Plan**

The site-specific safety and health plan must address the safety and health hazards of each phase of the response operation including the requirements and procedures for employee protection. The site safety and health plan should include the following:

- A safety and health risk and/or hazard analysis for each response task and operation. The risk/hazard analysis will include the following:
  - Location and approximate size of the response area;
  - Description and duration of the response activities to be performed;
  - Site topography and accessibility by air and roads;
  - Safety and health hazards expected to be encountered;
  - Exposure routes of expected contaminants and other risks such as potential skin absorption and irritation, potential eye irritation, and concentrations that are immediately dangerous to life and health (IDLH);
  - Present status and capabilities of emergency response teams that assist response personnel in an emergency; and
  - Health hazards involved or expected from contaminants present and their chemical and physical properties.
- PPE to be used by employees during each the response operations. The requirement for PPE will be based on the results of the preliminary site evaluation and the guidance provided in the Navy written safety and health program.
- Employee training requirements to ensure compliance with OSHA requirements. The training program section of the Navy written safety and health program should be used as guidance in preparing this section.

- Medical surveillance requirements to ensure compliance with the OSHA requirements. The medical surveillance program section of the Navy's written safety and health program should be used as guidance in preparing this section.
- A schedule for and the types of air monitoring to be conducted for IDLH conditions, combustible gases, and other conditions that may cause death or serious harm.
- Methods of maintenance and calibration of monitoring and sampling equipment to be used.
- A schedule for and the types of environmental sampling techniques and instruments to be used.
- A site control program for protecting employees involved in response operation. The site control program will include a site map, an indication of the work zones, a description of the "buddy" system, site communications, emergency alert signals, standard operating procedures (SOPs), or safe work practices, and identification of the nearest medical assistance.
- SOPs must minimize personnel and equipment contact with spill substances.
- Decontamination procedures must be developed that cover all phases of response operations. These procedures must be communicated to all response personnel and implemented before any response equipment or employees enter areas where they can potentially be exposed.
- An emergency response plan that is a separate section of the safety and health plan must be developed that covers:
  - Pre-emergency planning, personnel roles, lines of authority, and communication;
  - Emergency recognition and prevention; safe distances and places of refuge;
  - Site security and control evacuation routes and procedures;
  - Decontamination procedures (procedures that are not covered by the site-specific safety and health plan);
  - Emergency medical treatment and first aid;
  - Emergency alerting and response procedures;
  - PPE and emergency equipment;
  - Response area topography, layout, and prevailing weather conditions;
  - Procedures for reporting incident to **local, state, and federal** governmental agencies; and
  - A section covering the critique of a response and follow-up.
- Confined space entry procedures.
- A procedure for handling, labeling, and transporting drums and containers of recovered oil and oil-contaminated debris.

## **Safety Briefing**

The site-specific safety and health plan must provide for daily safety briefings that will be conducted before the start of work each day. The briefings will cover safety and health items that have changed or new information that has been obtained. These briefings will ensure that all response personnel have received information concerning safety and health plan updates.

## **Audits**

Safety and health audits must be conducted by the Operations Section division/branch supervisors. The audits will be used to determine the effectiveness of the site-specific safety and health plan and to determine if additional procedures are needed to protect response personnel. The results of each audit will be forwarded to the Industrial Hygienist Unit Leader, the Documentation Unit Leader, the Operations Section Chief, and the Incident Commander.

## **Generic Site Safety Plan**

The following section contains a generic site health and safety plan that should be adapted by the Safety Officer in preparing the site-specific health and safety plan.

## Generic Site Health and Safety Planning for Oil Spills

### References:

- (a) 29 CFR 1910.120 OSHA regulations for Hazardous Waste Sites
- (b) 40 CFR 311 Worker Protection
- (c) NIOSH/OSHA/USCG/EPA Occupational Safety and Health Guidance Manual for Hazardous Waste Site Activities (NIOSH 85-115)

### A. Site Description

Location: \_\_\_\_\_  
Hazards: Oil: \_\_\_\_\_  
Treatment chemicals: \_\_\_\_\_  
and general safety hazards: \_\_\_\_\_  
Surrounding population: \_\_\_ industrial, \_\_\_ residential, \_\_\_ rural, \_\_\_ unpopulated,  
other: \_\_\_\_\_  
Topography: \_\_\_ rocky, \_\_\_ sandy beach, \_\_\_ docks, \_\_\_ cliffs, \_\_\_ marshes,  
other: \_\_\_\_\_  
Weather-related hazards: \_\_\_ heat stress, \_\_\_ hypothermia, \_\_\_ frostbite \_\_\_ severe storms  
Additional information:

### B. Entry Objectives

Daily objectives may include oil recovery, booming, bioremediation, dispersant application, and related activities. Detailed objectives shall be developed daily, and shall be described during the pre-entry safety briefing.

### C. Site Organization

1. The site organization shall be developed each morning by the Sector Recorder for individual Sectors, and is modified as new personnel arrive or depart. All personnel arriving or departing from the sector/site shall report to the designated recorder.
2. **Generic Organization.** Incident organizations are developed on a case-by-case basis by the appropriate FOSC. The following organization serves as one example of a site organization, which is used to define the language in this document.
  - a. **FOSC/Staff** (all incidents): The supervising, office level command and control organization for the entire incident.
  - b. **Site** (all incidents): Primary field organization onsite for the entire incident. For small spills, this may be the only level of discrete field organization required.
  - c. **Sector** (subunits inserted between field teams and the site level for very large/complex incidents): This level is typically needed for large spills where an organizational level is needed between the entire site and individual teams. For example, a large spill might have a vessel off-loading sector, a floating-oil recovery sector with several boat teams, an east beach oil recovery sector with several teams, and a west beach oil recovery sector with no teams.

- d. **Field Team** (medium to large incidents): Supervisors or monitors assigned to site subunits, or (for very large organizations) assigned to sector subunits. This would be the smallest discrete level of supervision.

**D. Site Control**

1. Anyone entering or departing a **Work Area**, or associated control zones, shall report to the designated **RECORDER** for that location. Entry is conditional, based on approval of the **Site Supervisor**. The **Site Security Officer** shall enforce this policy at all times.
2. No person shall enter a site without subscribing to this or another approved Site Safety and Health plan.
3. No person shall enter a site without adequate training in hazardous waste operations safety and health, based on work assignment and applicable hazardous conditions.
4. **Site Boundaries.**
  - a. **Exclusion Zone(s):** That part of the work area where oil recovery is taking place shall be treated as an Exclusion Zone (EZ). Only properly outfitted and trained personnel (wearing appropriate protective clothing) shall be allowed in exclusion zones.
  - b. **Contamination Reduction Zone(s):** Contamination reduction zones (CRZ) shall be established at those parts of work areas used to clean and store oily clothing and equipment. These zones shall allow personnel to wash their hands and faces, and change into street clothing before leaving the site or consuming food and beverages.
  - c. **Support Zone(s):** Related uncontaminated field locations, such as command posts, equipment staging/storage, and eating areas. The Support Zone(s) (SZ) shall be maintained as clean as practical by observing decontamination procedures.
  - d. The above zones shall be marked as needed to control traffic and enforce decontamination procedures. Appropriate placards, barricades, traffic cones, and/or boundary tape shall be used for this purpose. The **Site Safety Officer** shall periodically inspect work areas to ensure the effectiveness of boundaries. The following color coding applies:
    - (1) Orange, red, or black and yellow for **Exclusion Zones**,
    - (2) Yellow for **Contamination Reduction Zones**, and
    - (3) Green for **Support Zones**.
5. A site map shall be developed and modified as necessary for each sector, and attached to the applicable Site Safety and Health Plan, by the **Site Recorder** and **Site Safety Officer**. The map shall include items such as (but not limited to) the following:
  - a. **EZ**
  - b. **CRZ**
    - The decontamination layout
    - Equipment storage
    - Temporary waste storage areas
    - Washing, toilets and hygiene facilities

- c. SZ
  - First-aid stations
  - Emergency firefighting equipment
  - Command posts/office spaces
  - New equipment staging/storage
  - Eating/rest areas
  - Bird/mammal cleaning and rehabilitation
- d. Location of Identified Hazards
  - Underground cables
  - Overhead cables
  - Pits, trenches, open holes, hatches
  - Wasted deck plate
  - Hearing protection areas
  - Hard hat areas
  - Suspected locations of poisonous plants, insects, or animals
  - High-pressure wash areas
  - Bioremediation application areas
  - Dispersant application areas

## E. Hazard Evaluation

### 1. Potentially hazardous chemical substances/mixtures.

- a. Oil: crude, gasoline, military JP-8, commercial Jet B, aviation gasoline, gas oils.
  - (1) Composed of an indefinite petroleum distillate mixture. The content typically includes benzene, toluene, xylene, naphthalene, and polyaromatic hydrocarbons (PAHs). The concentration of these products will vary widely depending on the source of the oil, weathering, and aging.
  - (2) **Hazard Description:** May cause dermatitis by skin contact, nausea by inhalation, and eye irritation by contact. Benzene is a hematologic toxin (it affects the blood and blood-forming organs), and is a carcinogen. The most important potential benzene, toluene, or xylene hazard is in poorly ventilated areas (such as pits or under docks), or around freshly spilled oil. Benzo(a)pyrene is a skin contact hazard and may cause skin cancer with chronic skin contact. As oil weathers and ages, benzo(a)pyrene becomes more concentrated because it evaporates much slower than other chemicals in the mixture.
  - (3) **Basic Precautions:** Stay away from, or upwind of, fresh oil spills; wear chemical-resistant clothing as necessary to protect against skin or eye contact; periodically change protective clothing that has oil on it; immediately change clothing that is showing evidence of oil penetrating to your skin; and wash skin with soap and water when changing into street clothing, before eating/drinking, or when exiting to a the CRZ. Flush eyes with water if oil gets in them. If ingested do not induce vomiting—contact a physician. Urine phenol should be tested as soon as possible (and not later than 72 hours after exposure) if there is a suspected overexposure to benzene. Urine specific gravity should be corrected to 1.024 for this test. If urine phenol values exceed 75 milligrams per liter further testing in accordance with 29 CFR 1910.1028(i)(4) may be needed, and individuals must be removed from areas of potential benzene exposure until values return to normal.

- b. Oil: kerosene, diesels, military JP-5, commercial Jet A.
    - (1) Composed of an indefinite petroleum distillate content typically including PAHs. The concentration of these products will vary widely depending on the source of the oil, weathering, and aging.
    - (2) **Hazard Description:** May cause dermatitis by skin contact, nausea by inhalation, and eye irritation by contact. Benzo(a)pyrene is a skin contact hazard and may cause skin cancer with chronic skin contact.
    - (3) **Basic Precautions:** Wear chemical-resistant clothing as necessary to protect against skin or eye contact; periodically change protective clothing that has oil on it; immediately change clothing that is showing evidence of oil penetrating to your skin; and wash skin with soap and water when changing into street clothing, before eating/drinking, or when exiting to a CRZ. Flush eyes with water if oil gets in them. If ingested, do not induce vomiting; contact a physician.
  - c. Bioremediation application. See attached MSDS information when these products are in use.
  - d. Dispersant applications. See attached MSDS information when these products are in use.
2. Additional hazards may be encountered onsite and shall (along with any other applicable hazards found during the site survey) be marked on the attached project maps. See also the attached listing of generic health hazard information.
- Slippery rocks
  - Dangerous working surfaces (e.g., wasted deck plating or rotten wood floors)
  - Difficult access/egress between vessels and docks
  - Drowning
  - Heat stress \_\_\_\_ Hypothermia \_\_\_\_ Cold stress
  - Ultraviolet (UV) sunlight (eyes/skin)
  - Noise hazards
  - Ticks \_\_\_\_ snakes \_\_\_\_ bees \_\_\_\_ yellow jackets
  - Poison \_\_\_\_ ivy/ \_\_\_\_ oak/ \_\_\_\_ sumac
  - Overhead/buried electrical cables
  - Open \_\_\_\_ manholes/ \_\_\_\_ pits/ \_\_\_\_ trenches/ \_\_\_\_ hatches
  - Falling objects
  - Carbon monoxide from vehicle exhaust
  - Fire and explosion hazards

#### F. Controls

The following controls shall be observed on site.

- 1. **Fires.** Each restriction zone and associated contamination reduction zone shall have at least one each of the following:
  - A fully charged Class A fire extinguisher for ordinary fires,
  - A fully charged Class B fire extinguisher for liquid fires, and
  - A hand-held foghorn to alert personnel.

The above items shall be maintained in a readily accessible location, clearly labeled in red, and with the location noted on the project map.

2. **Slippery Rocks and Surfaces.** All personnel in the work area shall wear rubber safety boots with steel toe/shank and textured bottoms. Boat crews may substitute clean deck shoes with textured soles (free of oil on cloth/leather uppers, and no oil observable inside the shoes).
3. **Lighting.** Portable lighting shall be provided for dark areas or work after sunset.
4. **Work Near Water.** All personnel working in boats, on docks, or generally within 10 feet of water deeper than 3 feet, shall wear Coast Guard-approved personal flotation devices (PFDs).
5. **Heat Stress.** The **Site Safety Officer** shall make heat stress determinations throughout the day. If a heat stress hazard exists, an alert shall be passed to all teams to implement mandatory rest periods. The **Site Safety Officer** shall generally be guided by the American Conference of Governmental Industrial Hygienists (ACGIH) guidelines in determining work/rest periods. Fluids shall be available at all times and encouraged during rest periods. (See attached information sheet on heat-related health effects.)
6. **Cold Stress.** Workers shall be provided with adequate warm clothing. The **Site Safety Officer** shall make cold stress determinations throughout the day when temperatures fall below 50°F.
  - a. If a cold stress hazard exists, an alert shall be passed to all teams to implement mandatory rest/warm-up periods. The **Site Safety Officer** shall generally be guided by the ACGIH guidelines in determining rest/warm-up periods.
  - b. For prolonged cold weather operations, warming shelters shall be provided for rest periods. Warm and/or sweet fluids (such as soups, cocoa, cider, or sweetened-low caffeine-hot teas) shall also be available during rest periods. Drinking coffee should not be encouraged.
  - c. For prolonged water temperatures below 59°F, or a combined water and air temperature less than 100°F, exposure suits shall be worn by personnel working/traveling in small boats or aircraft over water.
7. **High Noise Levels.** Hearing protection shall be used in high noise areas (exceeding 84 dBA, or as designated by the Site Safety Officer). Locations likely to exceed this level include: the vicinity of vacuum trucks and heavy equipment, bird hazing stations, and generally where noise levels require personnel to raise their voices to be heard.
8. **Poisonous Insects** (e.g., mosquitoes and ticks). All personnel shall be provided with long-sleeved clothing and insect repellant in designated areas.
9. **Poisonous Snakes.** All personnel working in designated areas shall wear snake-proof leggings or hip-high rubber boots.
10. **Poisonous Plants** (e.g., poison ivy, oak, and sumac). Long-sleeved clothing shall be worn in areas designated to contain these plants. Areas known to contain these plants shall be marked/posted to the extent possible at the site. Emergency medical personnel shall prescribe first-aid treatments to be carried in these areas.
11. **Electrical Hazards.** Electrical power lines (buried or overhead) shall be marked on applicable project maps, and physically marked in the field as necessary.

12. **Trap Hazards.** Open manholes, pits, trenches, or similar hazards shall be noted on project maps, and marked with placarded barricades. The Site Recorder shall ensure that these locations are periodically checked during the day and additionally if entering personnel are not accounted for at the end of a shift.
13. **Carbon Monoxide.** Vehicle/equipment operators shall ensure that personnel are not allowed to linger or work near exhaust pipes or carbon monoxide sources.
14. **Falling Objects.** Hard hat areas determined by site survey shall be noted on project maps.
15. **UV Light Exposure.** Sunscreens of protection factor 15 (or greater), and UV-tinted safety glasses shall be made available for response personnel as needed to prevent overexposure to UV light.
16. **Buddy System.** The buddy system shall be observed inside the Work Area (EZ and CRZ). Personnel must work within sight of their assigned partner at all times. A partner shall be assigned by the Recorder as personnel check in. Personnel shall use whistles to indicate that they need assistance in areas where they may be obscured from supervisors (e.g. high grass, boulders, or warehouse areas) as noted on the Project Map.
17. **PPE.** The following PPE ensembles shall be used while onsite. If designated "as needed", the equipment does not have to be worn unless the item is needed to keep oil off clothing and skin. The Site Safety Officer may modify ensembles on a case-by-case basis as approved by the Sector/Site Supervisor.

Location	Job Function	Level
Work Area	Bioremediation crews	C1
	High-pressure wash crews	C2
	Sampling crews	C3
	Dispersant crews	D
	All others	D
CRZ	All personnel	D
SZ	All personnel	Street clothing

18. **Sanitation and potable water.**
  - a. **Potable water.** An adequate supply of potable water, or other drinking fluids, shall be maintained at all times throughout the site. Containers for drinking fluids shall be capable of being tightly closed, and equipped with a tap. These containers must also be labeled so that the contents are not accidentally used for other purposes. Where single-service cups are supplied, the unused cups shall be maintained in sanitary containers, and a separate disposal container provided for used cups.
  - b. **Nonpotable water.** Water intended for uses other than drinking or washing shall be identified in such a way that it is not accidentally used for drinking, washing, or cooking. There shall be no cross-connection of potable and nonpotable water supplies.

- c. Toilet facilities. Toilet facilities shall be provided at a minimum in accordance with Table H-120.2 (Toilet Facilities) of 29 CFR 1910.120(n).
- |     |                       |                                               |
|-----|-----------------------|-----------------------------------------------|
| (1) | 20 or fewer people    | 1 facility                                    |
|     | 20-200 people:        | 1 toilet seat, and<br>1 urinal per 40 persons |
|     | More than 200 people: | 1 toilet seat, and<br>1 urinal per 50 persons |
- (2) Toilets shall be provided so that they are readily accessible from all work areas. Mobile work crews with ready access to toilet facilities using their own transportation do not need to have toilet facilities at their temporary work sites.
- (3) Sewage shall be handled in accordance with local health codes using one of the following means:
- Sanitary sewer
  - Chemical toilets
  - Recirculating toilets
  - Combustion toilets
  - Flush toilets
- d. Food shall be handled in accordance with the requirements of local jurisdiction.
- e. Washing Facilities. Washing facilities shall be readily accessible by all employees. In addition to sanitary cleaning, these facilities shall be so equipped that they can be used to remove oily residues from the skin. Washing facilities shall be maintained free of contaminants above exposure limits, and as free as practical from oily residues.
- f. Showers. For oil spill operations lasting more than six months, showers and changing rooms must be provided in accordance with 29 CFR 1910.120(n)(7); and 29 CFR 1910.141(d)(3) and 1910.141(e).

#### G. Communications

1. General signals:
- a. A whistle shall be treated as a need for assistance.
  - b. Repeated short blasts from a hand-held foghorn shall be used to indicate a fire emergency.
2. VHF Channel \_\_\_\_\_ has been designated as the working frequency for all sectors.
3. VHF Channel \_\_\_\_\_ is designated for site emergencies.
4. Cellular phone number of Command Post: \_\_\_\_\_
5. Cellular phone number of Site Safety Officer: \_\_\_\_\_
6. Other cellular phone numbers:

7. Medical Assistance:  
Nearest Medical Facility (attach map):  
Phone:  
Location:  
Phone for Ambulance: 911 or local emergency number
8. Phone Police/Sheriff: 911 or local emergency number
9. Phone for Fire Department: 911 or local emergency number

**H. Decontamination Procedures**

1. Personnel with contaminated clothing and equipment shall leave the Work Area by following the prescribed decontamination below:
  - a. Wipe off oily equipment and PPE clothing with a sorbent pad.
  - b. Inspect PPE clothing for rips or other damage. Inspect the inside of PPE clothing for signs of oil penetration. Discard if damage or oil penetration observed.
  - c. Store oily equipment in contaminated equipment storage.
  - d. Store oily PPE clothing in labeled lockers.
  - e. Discard oily articles in appropriate trash bins.
  - f. Remove, clean, and inspect respirators.
  - g. Store cleaned respirators in respirator storage.
  - h. Place cloth coveralls in laundry basket or discard if excessively dirty.
  - i. Wash face and hands with soap and water.
  - j. Change into street clothing.
2. Equipment for Decontamination:
  - Decontamination shelter
  - Orange, red, yellow, green, and black and yellow tape for zones/hazards
  - Plastic or painted metal placards for "Exclusion Zone," "Contamination Reduction Zone," "Support Zone," and blank placards and markers
  - Saw horses, wood stakes, hammers, and nails
  - Area for new/clean equipment storage
  - Area for new PPE storage
  - Area for clean cloth coverall storage
  - Hangers for oily PPE clothing
  - Lockable storage for street clothing
  - Waterless soap
  - Soapy water for respirators (when applicable)
  - Sterilizing solution for respirators
  - Clean plastic bags for respirator storage

- Towels
- Sorbent pads
- Lined bins for oily debris
- Trash cans and trash bags for other debris/garbage

## **I. Emergency Procedures**

### **1. Emergency Medical Procedures:**

- **Remain With Your Assigned Buddy At All Times.**
- Use whistle to call for assistance, if necessary.
- Do not attempt to move seriously injured personnel, summon an ambulance to come to the injured person.
- Report all injuries to your supervisor.

### **2. Emergency Fire Procedures:**

- **Remain With Your Assigned Buddy At All Times.**
- **DO NOT** attempt to fight fires other than small fires.
- **DO NOT** take extraordinary measures to fight fires.
- Sound fire signal if fire cannot be extinguished quickly.
- Alert nearby personnel to call fire department.
- Notify supervisor and Site/Sector Recorder.
- All other personnel hearing the fire foghorn signal shall immediately proceed, **With Their Assigned Buddy**, to the designated entry/exit point and **Site/Sector Recorder** for roll call.
- The Site/Sector Supervisor OR the Fire Department shall ensure that the fire is extinguished OR that the Fire Department is called for assistance **Before** restarting work.

## **J. Site Safety Meetings**

Site Safety Meetings shall be held by each Supervisor immediately before a shift or beginning a new work assignment, and at the end of each shift. At a minimum these meetings will describe the work to be accomplished, discuss safety procedures changes, and develop "pass-the-word" notes for the Site/Sector Recorder to pass to personnel entering the area.

**K. Site Safety Officer**

The Site Safety Officer for this incident is: \_\_\_\_\_

The responsibilities of the Site Safety Officer include (but are not limited to):

- Coordination of the FOSC safety and health concerns with the Scientific Support Coordinator
- Keeping this plan current
- Liaison with site safety officers from other organizations

**L. Authorizations**

Site Safety Officer: \_\_\_\_\_ Date: \_\_\_\_\_

Federal On-Scene Coordinator: \_\_\_\_\_ Date: \_\_\_\_\_

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### **Site/Sector Organization Record Sheet**

The **Site/Sector Recorder** maintains an up-to-date, comprehensive organization record. When relieved, the **Recorder** provides this site organization record/log to the incident's **Documentation Officer**, assists the relief in starting a new organization record, and accounts for all personnel logged into the area. All persons wishing to enter the work area (including the EZ and CRZ) must subscribe to a site safety and health plan, be adequately trained in hazardous waste site safety, and be adequately trained for their work assignments.

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**Site/Sector Organization Record Sheet**

Site/Sector Name: \_\_\_\_\_

Recorder's Name: \_\_\_\_\_

Record Start Date/Time: \_\_\_\_\_ Stop Date/Time: \_\_\_\_\_

Printed name: _____	Time	Time	Time	Time
	In	Out	In	Out

Supervisor: \_\_\_\_\_

Site/Sector Safety: \_\_\_\_\_

Security: \_\_\_\_\_

EMT/First Aid: \_\_\_\_\_

Other Reps: \_\_\_\_\_

Field Team Name: \_\_\_\_\_  
(e.g. oil recovery team, bioremediation team, water wash team)

Supervisor: \_\_\_\_\_

Members: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Emergency Medical Technician: \_\_\_\_\_

## PPE Ensembles

### Level D Ensemble:

- \_\_\_\_ Cloth coveralls
  - Option: long-sleeved coveralls (poison plant areas)
  - Option: short-sleeved coveralls (heat stress alert)
  - Option: Street clothing may be worn by supervisory personnel, technicians, specialists, etc. who will not be exposed to liquid oil, or high-pressure wash sprays, etc.
- \_\_\_\_ Rubber steel toe/shank safety boots with textured bottoms
  - Option: hip-high rubber boots (e.g., designated snake areas)
  - Option: deck shoes with textured soles (e.g., boat operations)
- \_\_\_\_ Rubber gloves (as needed)
  - Option: leather gloves (if no contact with oil)
- \_\_\_\_ Rubber rain pants (as needed)
  - Option: disposable if oiling is light
- \_\_\_\_ Rubber rain jacket and hood (as needed)
  - Option: disposable if oiling is light
- \_\_\_\_ Rubber apron (as needed)
  - Option: disposable if oiling is light
- \_\_\_\_ PFD (all personnel on or near water)
- \_\_\_\_ Quart bottle to carry fluids (during heat stress alerts)
- \_\_\_\_ Hearing protection (in noisy areas)
- \_\_\_\_ Insect repellant (in designated mosquito/tick areas)
- \_\_\_\_ Hard hat (all personnel in designated areas)
- \_\_\_\_ Safety glasses (as required by Site Safety Officer)
  - Option: with tinted lenses (as required for sunlight)
- \_\_\_\_ Sunscreen (as needed for sunlight)
- \_\_\_\_ Whistle (in designated areas)

#### Notes:

1. "As Needed" means to use when and in such a way to prevent significant skin contact with oil.
2. "Rubber" means chemical-resistant material which resists oil penetrating to the skin or cloth garments underneath.

### Level C Ensemble

- \_\_\_ All Level D items
- \_\_\_ Rubber gloves (Mandatory)
- \_\_\_ Plastic rain pants (Mandatory)  
Option: disposable if oiling/contamination is light
- \_\_\_ Plastic rain jacket with hood (Mandatory)  
Option: disposable if oiling/contamination is light
- \_\_\_ Respiratory protection  
Full face respirator
- \_\_\_ Half mask respirator
- \_\_\_ Organic vapor cartridge
- \_\_\_ Dust, fume, mists cartridge
- \_\_\_ Paint spray combination cartridge
- \_\_\_ Other: \_\_\_\_\_
- \_\_\_ Additional eye/face protection
- \_\_\_ Goggles
- \_\_\_ Face shields
- \_\_\_ Other: \_\_\_\_\_

**Notes:**

1. "As Needed" means to use when and in such a way to prevent significant skin contact with oil.
2. "Rubber" means a chemical-resistant material which resists oil penetrating to the skin or cloth garments underneath.

### **General Signs/Symptoms That Indicate Potential Toxic Exposures**

- Sudden weight loss or change in appetite
- Unusual fatigue or new sleeping difficulties
- Unusual irritability
- Skin rashes, allergies, sores
- Hearing loss
- Vision loss, problems
- Changes in sense of smell
- Shortness of breath, asthma, cough or sputum production
- Chest pains
- Nausea, vomiting, diarrhea, constipation
- Weakness, tremors
- Headaches
- Personality changes

**Sample Site Drawing**

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## **Manifestations of Toxic Effects to Various Target Organs:**

**Target Organ:** Skin

**Manifestations:** Dermatitis, chloracne, skin cancer

**Chemical/Physical Agent(s):** hydrocarbon solvents, chlorinated hydrocarbons (e.g., polychlorinated biphenyls [PCB]), soap, dioxane, alcohols

**Target Organ:** Respiratory system

**Manifestations:** Acute pulmonary edema, pneumonitis, asthma, lung cancer

**Chemical/Physical Agent(s):** Many forms of dusts, fumes, and vapors

**Target Organ:** Cardiovascular system

**Manifestations:** Arrhythmias, angina

**Chemical/Physical Agent(s):** Carbon monoxide, hydrogen sulfide, organophosphates, glues/glue-solvents, temperature extremes

**Target Organ:** Gastrointestinal system

**Manifestations:** Abdominal pain, nausea, vomiting, diarrhea, bloody stools, hepatic necrosis, hepatic cancer, hepatic fibrosis

**Target Organ:** Genitourinary system

**Manifestations:** Chronic renal disease, bladder cancer

**Chemical/Physical Agent(s):** Halogenated hydrocarbons

**Target Organ:** Nervous system

**Manifestations:** Headache, convulsions, coma, peripheral neuropathy

**Chemical/Physical Agent(s):** Carbon monoxide, organophosphates, organic solvents

**Target Organ:** Auditory system

**Manifestations:** Temporary and permanent hearing loss/shift

**Chemical/Physical Agent(s):** Loud noise

**Target Organ:** Ophthalmic system

**Manifestations:** Eye irritation, cataracts

**Chemical/Physical Agent(s):** Petroleum products, UV radiation

**Target Organ:** Hematological system

**Manifestations:** Anemia, bleeding disorder, leukemia

**Chemical/Physical Agent(s):** Benzene

## **Heat Stress Information From NIOSH 86-112 Health**

### **Safety Problems:**

Safety problems are common to hot environments as heat tends to promote accidents due to slippery objects from sweaty palms, dizziness, or the visual distortions from fogged safety glasses.

The frequency of accidents, in general, appears to be higher in hot environments than in more moderate environmental conditions. Working in a hot environment lowers an individual's mental alertness and physical performance. Increased body temperature and physical discomfort promote irritability, and other emotional states which can cause workers to overlook safety procedures or to divert attention from hazardous tasks.

### **Health Problems:**

Excessive exposure to a hot work environment can bring about a variety of heat-induced disorders.

**Heat Stroke.** Heat stroke is the most serious health problems associated with working in a hot environment. It occurs when the body's temperature regulatory system fails and sweating becomes inadequate. A heat stroke victim's skin is hot, usually dry, red or spotted. Body temperature is generally 105°F or higher, and the victim can be mentally confused, delirious, convulsive, or unconscious.

Any person showing symptoms of heat stroke requires immediate hospitalization. First-aid including removing the victim to a cool area, thoroughly soaking the clothing with water, and vigorously fanning the body — should be administered immediately. Further treatment, at a medical facility, should include continuing the cooling process and monitoring complications which often accompany the heat stroke. Early recognition and treatment of heat stroke is the only means of preventing permanent brain damage or death.

**Heat Exhaustion.** Heat exhaustion includes several clinical disorders having symptoms which may resemble the early symptoms of heat stroke. Heat exhaustion is caused by the loss of large amounts of fluid by sweating, sometimes with excessive loss of salt. A worker suffering from heat exhaustion still sweats but experiences extreme weakness or fatigue, giddiness, nausea, or headache. In more serious cases, the victim may vomit or lose consciousness. The skin is clammy and moist, the complexion is pale or flushed, and the body temperature is normal or only slightly elevated.

In most cases, treatment involves resting the victim in a cool place and administering plenty of liquids. Victims with mild cases of heat exhaustion generally recover quickly. Those with severe cases may require extended care. There are no known permanent effects.

**CAUTION — PERSONS WITH HEART PROBLEMS OR THOSE ON LOW-SODIUM DIETS WHO WORK IN HOT ENVIRONMENTS SHOULD CONSULT A PHYSICIAN ABOUT POTENTIAL HEALTH PROBLEMS.**

**Heat Cramps.** Heat cramps are painful spasms of the muscles that can occur during times of high sweat without an adequate replacement of the body's salt. Drinking large quantities of water tends to dilute the body's fluids, while the body continues to lose salt. Shortly thereafter, the low salt level in the muscles can cause painful cramps. The affected muscles may be part of the arms, legs, or abdomen; but tired muscles (those used in performing the work) are generally most susceptible. Cramps may occur during or after work hours and may be relieved by ingesting salted liquids.

**CAUTION — PERSONS WITH HEART PROBLEMS OR THOSE ON LOW-SODIUM DIETS WHO WORK IN HOT ENVIRONMENTS SHOULD CONSULT A PHYSICIAN ABOUT POTENTIAL HEALTH PROBLEMS.**

**Fainting.** A worker who is not accustomed to hot environments and who stands immobile in the heat can faint. Due to the body's attempts to control internal temperature, enlarged blood vessels in the skin and lower body may pool blood rather than return it to the heart to be pumped to the brain. Upon lying down, the worker should soon recover. By keeping active and moving around, blood should be prevented from pooling, and the patient can avoid further fainting.

**Heat Rash.** Heat rash is likely to occur in hot, humid environments where heat is not readily evaporated from the skin's surface, leaving it wet most of the time. Sweat ducts become plugged, and a skin rash can develop. When the rash is extensive or complicated by infection, heat rash can be very uncomfortable and may reduce a worker's performance. The worker can prevent this condition by resting in a cool place part of each day and by regularly bathing and drying the skin.

**Transient Heat Fatigue.** Transient heat fatigue refers to the temporary state of discomfort and mental or psychological strain arising from prolonged heat exposure. Workers unaccustomed to the heat are particularly susceptible and can suffer, to varying degrees, a decline in task performance, coordination, alertness, and vigilance. The severity of transient heat fatigue can be lessened by a period of gradual adjustment to the hot environment (heat acclimatization).

**Preparing For Work In The Heat:**

One of the best ways to reduce heat stress in workers is to minimize the heat in the workplace. However, there are some work environments where heat production is difficult to control, such as outdoors where exposed to various weather conditions.

Humans, to a large extent, are capable of adjusting to the heat. Adjusting to heat under normal circumstances usually takes five to seven days, during which time the body will undergo a series of changes that will make continued exposure to heat more endurable.

Gradual exposure to heat gives the body time to become accustomed to higher environmental temperatures. Heat disorders in general are more likely to occur among workers who have not been given time to adjust to working in the heat or among workers who have been away from hot environments or who have gotten accustomed to lower temperatures. Summer heat is likely to affect the unacclimatized worker. Likewise, those who return to work after a leisurely vacation or extended illness can be affected by the heat in the work environment. Under such circumstances, the worker should be allowed to acclimatize to the hot environment.

Heat stress depends, in part, on the amount of heat the worker's body produces while a job is being performed. The amount of heat produced during hard, steady work is much higher than that produced

during intermittent or light work. One way of reducing the potential for heat stress is to make the job less strenuous or lessen its duration by providing adequate rest time.

#### **Number and Duration of Exposures:**

Rather than be exposed to heat for extended periods of time during the course of a job, workers should, wherever possible, be permitted to distribute the workload evenly over the day and incorporate work-rest cycles. Work-rest cycles give the body an opportunity to get rid of excess heat, slow down the production of internal body heat, and provide greater blood flow to the skin.

Workers employed outdoors are especially subject to weather changes. A hot spell or a rise in humidity can create overly stressful conditions.

**Rest Areas.** Providing cool rest areas in hot work environments considerably reduces the stress of working in those environments. Rest areas should be as close to the work area as possible, and provide shade. Individual work periods should not be lengthened in favor of prolonged rest periods. Shorter but frequent work-rest cycles are the greatest benefit to the worker.

**Drinking Water.** In the course of a day's work in the heat, a worker may produce as much as 2 to 3 gallons of sweat. Because so many heat disorders involve excessive dehydration of the body, it is essential that water intake during the workday be about equal to the amount of sweat produced. Most workers exposed to hot conditions drink less fluids than needed due to an insufficient thirst drive. A worker, therefore, should not depend on thirst to signal when and how much to drink. Instead, the worker should drink five to seven ounces of fluids every 15 to 20 minutes to replenish the necessary fluids in the body. There is no optimum temperature of drinking water, but most people tend not to drink warm or very cold fluids as readily as they will cool ones. Whatever the temperature of the water, it must be palatable and readily available. Individual drinking cups should be provided – never use a common drinking cup.

Heat-acclimatized workers lose much less salt in their sweat than do workers who are not adjusted to the heat. The average American diet contains sufficient salt for acclimatized workers even when sweat production is high. Salt replacement is required, the best way to compensate for the loss is to add a little extra salt to the food. Salt tablets SHOULD NOT be used.

**CAUTION — PERSONS WITH HEART PROBLEMS OR THOSE ON A LOW-SODIUM DIET WHO WORK IN HOT ENVIRONMENTS SHOULD CONSULT A PHYSICIAN ABOUT POTENTIAL HEALTH PROBLEMS.**

**Protective Clothing.** Clothing inhibits the transfer of heat between the body and the surrounding environment. Therefore, in hot jobs where the air temperature is lower than skin temperature, wearing excessive clothing reduces the body's ability to lose heat to the air. When air temperature is higher than skin temperature, clothing can help to prevent the transfer of heat from the air to the body. The advantage of wearing additional clothes may be nullified if they interfere with the evaporation of sweat (such as rain slickers or chemical-protective clothing).

## Bulk Liquid Cargoes That Contain Benzene

This is a partial list of products (and their assigned Chemical Hazards Response Information System (CHRIS) codes in parentheses) which contain benzene. The exact volumes will vary among manufacturers and batches. Benzene vapor concentrations which may be produced by these products will also vary from mixture to mixture, depending on the chemical properties and volume percentages of the different components.

benzene (BNZ)

benzene hydrocarbon mixtures containing 10% or more benzene (BHB)

benzene hydrocarbon mixtures with acetylene (BHA)

benzene, toluene, xylene mixtures (BTX)

C-5 mixture (15% or more benzene, isoprene, 1,3-pentadiene [CFX])

coal tar (COR)

coal tar pitch (CTP)

coal tar naphtha (NCT)

coal tar: see "oil" coal tar (OCT)"

cyclopentadiene, styrene, benzene mixtures (CSB)

gas oil (GOC)

gasoline: aromatic (GAR)

gasoline: automotive (GAT)

gasoline: aviator (GAV)

gasoline: pyrolysis (greater than 5% benzene) (GPY)

gasoline: straight run (GSR)

gasoline: blending stock reformats (GRF)

jet fuel: JP-5 (JPV), similar to Commercial Jet A

JP-5 generally does not contain benzene except in trace amounts.

Consult MSDSs for specific manufacturer

naphtha: see "coal tar naphtha" (NCT)

naphtha: solvent (NSV)

naphtha: Stoddard solvent (NSS)

naphtha: VM&P (75% naphtha) (NVM)

naphtha: see "petroleum naphtha (TPN)"

oil: crude oil (OIL)

oil: coal tar (OCT)

petroleum naphtha (PTN)

white spirit (WSP)

white spirit (low 15%-20% aromatic) (WSL)

**Some Trade Name Products Which May Contain Benzene:**

"Butadiene, Benzene Mix"  
"Coke Oven Light Oil"  
"Coal Tar Light Oil"  
"Depentanized Aromatic Stream"  
"Dripolene"  
"Ethylene Dichloride-Crude"  
"Hytrol D"  
"Light Aromatics Containing Benzene"  
"Naphtha Cracking Fraction"  
"Petroleum Hydrocarbon Polymers"  
"Phenol (and Cresol Mixtures with 5% Benzene or More)"  
"Raffinate"

### **11.1 MSDSs For NAS Corpus Christi**

The following MSDSs for NAS Corpus Christi follow this page:

- **JP-5**
- **Automotive Gasoline, Lead-free**
- **Diesel Fuel Oil No. 2-D**

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DOD Hazardous Materials Information System

DoD 6050.5-LR

AS OF October 1995

Proprietary Version - For U.S. Government Use Only

FSC: 9130

NIIN: 002732379

Manufacturer's CAGE: 3P045

Part No. Indicator: A

Part Number/Trade Name: JP-5

General Information

Item Name: TURBINE FUEL, AVIATION

Company's Name: DIAMOND SHAMROCK REFINING AND MARKETING CO

Company's Street: 9830 COLONNADE BLVD

Company's P. O. Box: 696000

Company's City: SAN ANTONIO

Company's State: TX

Company's Country: US

Company's Zip Code: 78269-6000

Company's Emerg Ph #: 210-979-8346

Company's Info Ph #: 210-530-8680

Distributor/Vendor # 1:

Distributor/Vendor # 1 Cage:

Distributor/Vendor # 2:

Distributor/Vendor # 2 Cage:

Distributor/Vendor # 3:

Distributor/Vendor # 3 Cage:

Distributor/Vendor # 4:

Distributor/Vendor # 4 Cage:

Safety Data Action Code:

Safety Focal Point: D

Record No. For Safety Entry: 011

Tot Safety Entries This Stk#: 027

Status: SE

Date MSDS Prepared: 31DEC93

Safety Data Review Date: 26SEP94

Supply Item Manager: KY

MSDS Preparer's Name: UNKNOWN

Preparer's Company:

Preparer's St Or P. O. Box:

Preparer's City:

Preparer's State:

Preparer's Zip Code:

Other MSDS Number:

MSDS Serial Number: BGXMV

Specification Number: MIL-T-5624

Spec Type, Grade, Class: GRADE JP-5

Hazard Characteristic Code: F8

Unit Of Issue: GL

Unit Of Issue Container Qty: BULK

Type Of Container: BULK

Net Unit Weight: BULK

Report for NIIN: 002732379

NRC/State License Number: N/R  
Net Explosive Weight: N/R  
Net Propellant Weight-Ammo: N/R  
Coast Guard Ammunition Code: N/R

=====

Ingredients/Identity Information

=====

Proprietary: NO  
Ingredient: ALIPHATIC PETROLEUM SOLVENT  
Ingredient Sequence Number: 01  
Percent: >97  
Ingredient Action Code:  
Ingredient Focal Point: D  
NIOSH (RTECS) Number: OA5500000  
CAS Number: 8008-20-6  
OSHA PEL: NOT ESTABLISHED  
ACGIH TLV: NOT ESTABLISHED  
Other Recommended Limit: NONE SPECIFIED

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Proprietary: NO  
Ingredient: DIETHYLENE GLYCOL MONOMETHYL ETHER  
Ingredient Sequence Number: 02  
Percent: .15-0.2  
Ingredient Action Code:  
Ingredient Focal Point: D  
NIOSH (RTECS) Number: KL6125000  
CAS Number: 111-77-3  
OSHA PEL: NOT ESTABLISHED  
ACGIH TLV: NOT ESTABLISHED  
Other Recommended Limit: NONE SPECIFIED

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Proprietary: NO  
Ingredient: NAPHTHALENE (SARA III)  
Ingredient Sequence Number: 03  
Percent: <3  
Ingredient Action Code:  
Ingredient Focal Point: D  
NIOSH (RTECS) Number: QJ0525000  
CAS Number: 91-20-3  
OSHA PEL: 10 PPM/15 STEL  
ACGIH TLV: 10 PPM/15 STEL; 9192  
Other Recommended Limit: NONE SPECIFIED

=====

Physical/Chemical Characteristics

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Appearance And Odor: COLORLESS LIQUID WITH AROMATIC ODOR; ODOR THRESHOLD 1 PPM.  
Boiling Point: 330-520F  
Melting Point: N/R  
Vapor Pressure (MM Hg/70 F): N/R  
Vapor Density (Air=1): N/R  
Specific Gravity: 0.80 - 0.81  
Decomposition Temperature: UNKNOWN

Report for NIIN: 002732379

Evaporation Rate And Ref: N/R  
Solubility In Water: NEGLIGIBLE  
Percent Volatiles By Volume: 100  
Viscosity: N/K  
pH: N/R  
Radioactivity: N/R  
Form (Radioactive Matl):  
Magnetism (Milligauss): N/P  
Corrosion Rate (IPY): UNKNOWN  
Autoignition Temperature: N/K

=====

#### Fire and Explosion Hazard Data

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Flash Point: 145F,63C  
Flash Point Method: PMCC  
Lower Explosive Limit: 1%  
Upper Explosive Limit: 5%  
Extinguishing Media: DRY CHEMICAL, FOAM, CARBON DIOXIDE.WATER SPRAY MAY BE EFFECTIVE ON BURNING PRODUCT.  
Special Fire Fighting Proc: USE A SELF-CONTAINED BREATHING APPARATUS AND FULL PROTECTIVE EQUIPMENT.  
Unusual Fire And Expl Hazrds: THIS ITEM IS COMBUSTIBLE.STATIC DISCHARGE MAY CAUSE SPONTANEOUS COMBUSTION.

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#### Reactivity Data

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Stability: YES  
Conditions To Avoid (Stability): HIGH HEAT,SOURCES OF IGNITION.  
Materials To Avoid: STRONG OXIDIZING AGENTS(EG.CHLORINE,CONCENTRATED OXYGEN,SODIUM).  
Hazardous Decomp Products: CARBON DIOXIDE,CARBON MONOXIDE  
Hazardous Poly Occur: NO  
Conditions To Avoid (Poly): N/R

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#### Health Hazard Data

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LD50-LC50 Mixture: ORAL LD50 (RAT) IS >5G/KG FOR INGRED #2  
Route Of Entry - Inhalation: YES  
Route Of Entry - Skin: YES  
Route Of Entry - Ingestion: YES  
Health Haz Acute And Chronic: EYES:MAY CAUSE IRRITATION.SKIN:MAY CAUSE IRRITATION AND DEFATTING.INGEST:MAY CAUSE GI TRACT IRRITATION.MAY CAUSE LUNG DAMAGE IF INGESTED.INHAL:MAY CAUSE RESPIRATORY IRRITATION AND CNS DEPRESSION.EYES,KIDNEYS AND BLOOD FORMING ORGANS.  
Carcinogenicity - NTP: NO  
Carcinogenicity - IARC: NO  
Carcinogenicity - OSHA: NO  
Explanation Carcinogenicity: NAPTHA MAY CAUSE SKIN TUMORS(API STUDY).EGMA MAY CAUSE REPRODUCTIVE EFFECTS.  
Signs/Symptoms Of Overexp: INHAL:ANESTHESIA,DIZZINESS,WEAKNESS, INCOORDINATION.COMBUSTION PRODUCTS MAY CAUSE NAUSEA,VOMITING,INCREASE HEARTBEAT;CARBON MONOXIDE MAY CAUSE LOSS OF CONSCIOUSNESS,HEART DAMAGE, SKIN/ EYES: BURNING SENSATION.INGEST:NAUSEA,VOMITING DIARRHEA;

CNS DEPRESSION IF ABSORBED.

Med Cond Aggravated By Exp: PERSONS WITH PRE-EXISTING DAMAGES TO THE EYES, KIDNEYS OR BLOOD FORMING ORGANS BE AT INCREASED RISK FROM EXPOSURE. Emergency/First Aid Proc: SKIN: REMOVE CONTAMINATED CLOTHING; WASH WITH SOAP AND WATER. EYES: FLUSH WITH WATER FOR 15 MINUTES. INHAL: REMOVE TO FRESH AIR. GIVE OXYGEN OR ARTIFICIAL RESPIRATION IF NEEDED. INGEST: DO NOT INDUCE VOMITING. GET PROMPT QUALIFIED MEDICAL ATTENTION. IF SPONTANEOUS VOMITING OCCURS, KEEP HEAD BELOW HIPS. DO NOT USE ADRENALIN.

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#### Precautions for Safe Handling and Use

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Steps If Matl Released/Spill: ELIMINATE SOURCES OF IGNITION. USE PROPER RESPIRATORY AND PROTECTIVE EQUIPMENT. SHUT OFF LEAK IF SAFE. DIKE. SOAK UP WITH A NON-COMBUSTIBLE INERT ABSORBANT (CLAY, SAND); PLACE IN PROPER CONTAINER FOR DISPOSAL. AVOID RUNOFF TO SEWER.

Neutralizing Agent: NONE

Waste Disposal Method: DISPOSE OF IN ACCORDANCE WITH FEDERAL, STATE AND LOCAL REGULATIONS. IF THE FLASHPOINT OF THE WASTE IS LESS THAN 140F, IT IS CLASSIFIED AS IGNITABLE-EPA CODE D001.

Precautions-Handling/Storing: STORE IN A COOL, DRY, WELL-VENTILATED PLACE. KEEP CONTAINER CLOSED WHEN NOT IN USE. AVOID HEAT, FLAMES AND OXIDIZERS.

Other Precautions: FOLLOW LABEL DIRECTIONS. AVOID BREATHING VAPORS. AVOID SKIN AND EYE CONTACT. GROUND CONTAINERS WHEN TRANSFERRING LIQUIDS. USE WITH ADEQUATE VENTILATION.

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#### Control Measures

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Respiratory Protection: WHERE ENVIRONMENTAL CONTROLS ARE LACKING OR IN ENCLOSED SPACES USE EITHER A SELF-CONTAINED BREATHING APPARATUS OR A NIOSH/MSHA APPROVED RESPIRATOR FOR ORGANIC VAPORS, DEPENDING ON THE AIRBORN CONCENTRATION.

Ventilation: LOCAL VENTILATION AT THE WORKSITE; MECHANICAL (GENERAL) VENTILATION TO MAINTAIN TLV/PEL.

Protective Gloves: IMPERVIOUS.

Eye Protection: CHEMICAL SPLASH GOGGLES

Other Protective Equipment: PROTECTIVE CLOTHING, AS NEEDED. PROVIDE A LOCAL EYE WASH STATION AND SAFETY SHOWER.

Work Hygienic Practices: WASH HANDS. SEPERATE WORK CLOTHES FROM STREET CLOTHES. LAUNDRER WORK CLOTHES BEFORE REUSE. KEEP FOOD OUT OF THE WORK AREA.

Suppl. Safety & Health Data: NONE

DOD Hazardous Materials Information System

DoD 6050.5-LR

AS OF October 1995

Proprietary Version - For U.S. Government Use Only

FSC: 9130

NIIN: 010315816

Manufacturer's CAGE: 46684

Part No. Indicator: A

Part Number/Trade Name: JP-8 JET FUEL

General Information

Item Name: TURBINE FUEL, AVIATION

Company's Name: COASTAL CORP

Company's Street: 9 GREENWAY PLAZA

Company's P. O. Box:

Company's City: HOUSTON

Company's State: TX

Company's Country: US

Company's Zip Code: 77046

Company's Emerg Ph #: 713-877-1400

Company's Info Ph #: 713-877-1400 / FAX 713-877-6754

Distributor/Vendor # 1:

Distributor/Vendor # 1 Cage:

Distributor/Vendor # 2:

Distributor/Vendor # 2 Cage:

Distributor/Vendor # 3:

Distributor/Vendor # 3 Cage:

Distributor/Vendor # 4:

Distributor/Vendor # 4 Cage:

Safety Data Action Code:

Safety Focal Point: D

Record No. For Safety Entry: 018

Tot Safety Entries This Stk#: 025

Status: SM

Date MSDS Prepared: 24JUN93

Safety Data Review Date: 08NOV93

Supply Item Manager: KY

MSDS Preparer's Name:

Preparer's Company:

Preparer's St Or P. O. Box:

Preparer's City:

Preparer's State:

Preparer's Zip Code:

Other MSDS Number:

MSDS Serial Number: BRZYN

Specification Number: MIL-T-83133

Spec Type, Grade, Class: GRADE JP8

Hazard Characteristic Code: F4

Unit Of Issue: GL

Unit Of Issue Container Qty: BULK

Type Of Container: BULK

Net Unit Weight: BULK

Report for NIIN: 010315816

NRC/State License Number:  
Net Explosive Weight:  
Net Propellant Weight-Ammo:  
Coast Guard Ammunition Code:

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Ingredients/Identity Information

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Proprietary: NO  
Ingredient: KEROSENE  
Ingredient Sequence Number: 01  
Percent: 100 %  
Ingredient Action Code:  
Ingredient Focal Point: D  
NIOSH (RTECS) Number: OA5500000  
CAS Number: 8008-20-6  
OSHA PEL: 100 PPM  
ACGIH TLV: 100 PPM 9091  
Other Recommended Limit: NONE RECOMMENDED

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Physical/Chemical Characteristics

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Appearance And Odor: CLEAR TO LIGHT AMBER LIQUID, MILD PETROLEUM ODOR  
Boiling Point: 401F, 205C  
Melting Point: NOT GIVEN  
Vapor Pressure (MM Hg/70 F): 1-2  
Vapor Density (Air=1): NOT GIVEN  
Specific Gravity: 0.78-0.84  
Decomposition Temperature: UNKNOWN  
Evaporation Rate And Ref: NOT GIVEN  
Solubility In Water: INSOLUBLE  
Percent Volatiles By Volume: 100 %  
Viscosity: 8 CST  
pH: N/K  
Radioactivity:  
Form (Radioactive Matl):  
Magnetism (Milligauss): N/P  
Corrosion Rate (IPY): UNKNOWN  
Autoignition Temperature: 475F

=====

Fire and Explosion Hazard Data

=====

Flash Point: 100F MIN  
Flash Point Method: N/P  
Lower Explosive Limit: NOT GIVEN  
Upper Explosive Limit: NOT GIVEN  
Extinguishing Media: DRY CHEMICAL, CARBON DIOXIDE, FOAM, WATER SPRAY.  
Special Fire Fighting Proc: USE A WATER SPRAY TO COOL FIRE-EXPOSED CONTAINERS. USE A SMOTHERING TECHNIQUE FOR EXTINGUISHING FIRE. DO NOT USE A FORCED WATER STREAM DIRECTLY; MAY SCATTER.  
Unusual Fire And Expl Hazrds: FLOWING FUEL CAN BE IGNITED BY SELF-GENERATED STATIC ELECTRICITY; CONTAINERS SHOULD BE GROUNDED AND BONDED.

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Reactivity Data

=====

Stability: YES

Cond To Avoid (Stability): HEAT, SPARK, FLAME, BUILD-UP OF STATIC ELECTRICITY.

Materials To Avoid: STRONG OXIDIZING AGENTS

Hazardous Decomp Products: CARBON MONOXIDE, CARBON DIOXIDE, HYDROCARBONS

Hazardous Poly Occur: NO

Conditions To Avoid (Poly): NONE. WILL NOT OCCUR.

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Health Hazard Data

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LD50-LC50 Mixture: NIOSH LIMIT 100 MG/M3

Route Of Entry - Inhalation: YES

Route Of Entry - Skin: YES

Route Of Entry - Ingestion: YES

Health Haz Acute And Chronic: SLIGHT TO MODERATE EYE IRRITATION; MODERATE SKIN IRRITATION; IRRITATING TO MUCOUS MEMBRANES AND RESPIRATORY TRACT; CAN BE IRRITATING TO MOUTH, THROAT, DIGESTIVE TRACT; ASPIRATION INTO LUNGS MAY CAUSE HEMORRHAGING, PULMONARY EDEMA, CHEMICAL PNEUMONITIS. CHRONIC EXPOSURE MAY CAUSE CHANGES IN FORMED ELEMENTS OF THE BLOOD.

Carcinogenicity - NTP: NO

Carcinogenicity - IARC: YES

Carcinogenicity - OSHA: NO

Explanation Carcinogenicity: IARC HAS DETERMINED SUFFICIENT EVIDENCE OF CARCINOGENICITY IN AMINALS; LIMITED EVIDENCE IN HUMANS.

Signs/Symptoms Of Overexp: EYE IRRITATION, SKIN IRRITATION/REDNESS/ DRYING, MUCOUS MEMBRANE IRRITATION, RESPIRATORY TRACT IRRITATION, HEADACHE, DIZZINESS, NAUSEA, VOMITING, LOSS OF COORDINATION, LOSS OF CONSCIOUSNESS, DIGESTIVE TRACT IRRITATION, DROWSINESS, LIVER DAMAGE, KIDNEY DAMAGE.

Med Cond Aggravated By Exp: MAY AGGRAVATE PRE-EXISTING DERMATITIS.

Emergency/First Aid Proc: EYES: IMMEDIATELY FLUSH WITH LARGE AMOUNTS OF WATER FOR 15 MINUTES. CONTACT PHYSICIAN IMMEDIATELY. SKIN: REMOVE CONTAMINATED CLOTHING AND SHOES. WASH AFFECTED AREAAS WITH SOAP AND WATER. CONATCT A PHYSICIAN IF REDDENING OR BLISTERING OCCURS. INHALATION: REMOVE TO FRESH AIR. IF BREATHING HAS STOPPED, APPLY ARTIFICIAL RESPIRATION. GET MEDICAL ATTENTION. INGESTION: DO NOT INDUCE VOMITING. GET DOCTOR.

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Precautions for Safe Handling and Use

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Steps If Matl Released/Spill: REMOVE SOURCES OF HEAT OR IGNITION INCLUDING INTERNAL COMBUSTION ENGINES AND POWER TOOLS. CLEAN UP SPILL, BUT DO NOT FLUSH TO SEWER OR TO SURFACE WATER. VENTILATE AREA AND AVOID BREATHING VAPORS OR MISTS.

Neutralizing Agent: NONE SPECIFIED BY MANUFACTURER.

Waste Disposal Method: PREVENT WASTE FROM CONTAMINATING SURROUNDING ENVIRONMENT. DISCARD ANY PRODUCT, RESIDUE, DISPOSAL CONTAINER OR LINER IN ACCORDANCE WITH ALL FEDERAL, STATE AND LOCAL REGULATIONS.

Precautions-Handling/Storing: STORE IN COOL, DRY AREA AWAY FROM INCOMPATIBLE WATER SOURCES OF HEAT AND IGNITION. GROUND AND BOND ALL TRANSFER AND STORAGE EQUIPMENT TO PREVENT SPARK

Other Precautions: DO NOT WELD, HEAT OR DRILL CONTAINER. EMPTIED CONTAINER

Report for NIIN: 010315816

MAY CONTAIN RESIDUE AND CAN BE DANGEROUS.

=====  
Control Measures  
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Respiratory Protection: USE APPROVED RESPIRATORY PROTECTION FOR CLEANING LARGE SPILLS OR ENTRY INTO LARGE TANKS, VESSELS OR OTHER CONFINED SPACES OR IN SITUATIONS WHERE AIRBORNE CONCENTRATIONS MAY EXCEED OCCUPATIONAL EXPOSURE LIMITS.

Ventilation: PROVIDE ADEQUATE GENERAL AND LOCAL EXHAUST VENTILATION.

Protective Gloves: IMPERVIOUS

Eye Protection: CHEMICAL SAFETY GLASSES, GOGGLES

Other Protective Equipment: WEAR IMPERVIOUS APRON, LONG SLEEVES, BOOTS AND FACE SHIELD WHEN HANDLING LARGE AMOUNTS OF PRODUCT.

Work Hygienic Practices: WASH WITH SOAP AND WATER AFTER HANDLING PRODUCT AND BEFORE EATING DRINKING OR SMOKING.

Suppl. Safety & Health Data: DO NOT WEAR CONTACT LENSES. MIDDLE DISTILLATES HAVE CAUSED KIDNEY DAMAGE AND SKIN CANCER IN LABORATORY ANIMALS.

DOD Hazardous Materials Information System

DoD 6050.5-LR

AS OF October 1995

Proprietary Version - For U.S. Government Use Only

FSC: 9130

NIIN: 001487103

Manufacturer's CAGE: 3V260

Part No. Indicator: A

Part Number/Trade Name: GASOLINE, UNLEADED

General Information

Item Name: GASOLINE, AUTOMOTIVE, REGULAR, MOGAS UNLEADED

Company's Name: KOCH REFINING CO.

Company's Street: SUNTIDE RD

Company's P. O. Box: 2608

Company's City: CORPUS CHRISTI

Company's State: TX

Company's Country: US

Company's Zip Code: 78403

Company's Emerg Ph #:

Company's Info Ph #:

Distributor/Vendor # 1:

Distributor/Vendor # 1 Cage:

Distributor/Vendor # 2:

Distributor/Vendor # 2 Cage:

Distributor/Vendor # 3:

Distributor/Vendor # 3 Cage:

Distributor/Vendor # 4:

Distributor/Vendor # 4 Cage:

Safety Data Action Code:

Safety Focal Point: D

Record No. For Safety Entry: 070

Tot Safety Entries This Stk#: 117

Status: SE

Date MSDS Prepared: 01MAR88

Safety Data Review Date: 01JUN89

Supply Item Manager: KY

MSDS Preparer's Name: DALE F. JANES

Preparer's Company:

Preparer's St Or P. O. Box:

Preparer's City:

Preparer's State:

Preparer's Zip Code:

Other MSDS Number:

MSDS Serial Number: BGWPG

Specification Number: VV-G-001690

Spec Type, Grade, Class: GR REGULAR, ALL CLAS

Hazard Characteristic Code: F2

Unit Of Issue: GL

Unit Of Issue Container Qty:

Type Of Container: BULK

Net Unit Weight:

Report for NIIN: 001487103

NRC/State License Number: N/R  
Net Explosive Weight:  
Net Propellant Weight-Ammo: N/R  
Coast Guard Ammunition Code:

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Ingredients/Identity Information

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Proprietary: NO  
Ingredient: GASOLINE  
Ingredient Sequence Number: 01  
Percent: 100  
Ingredient Action Code:  
Ingredient Focal Point: D  
NIOSH (RTECS) Number: LX3300000  
CAS Number: 8006-61-9  
OSHA PEL: 300 PPM/500 STEL  
ACGIH TLV: 300 PPM/500STEL;9192  
Other Recommended Limit:

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Proprietary: NO  
Ingredient: BENZENE (SARA III)  
Ingredient Sequence Number: 02  
Percent: 1.5  
Ingredient Action Code:  
Ingredient Focal Point: D  
NIOSH (RTECS) Number: CY1400000  
CAS Number: 71-43-2  
OSHA PEL: 1PPM/5STEL;1910.1028  
ACGIH TLV: 10 PPM; A2; 9192  
Other Recommended Limit:

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Proprietary: NO  
Ingredient: PARAFFINS  
Ingredient Sequence Number: 03  
Percent: 46  
Ingredient Action Code:  
Ingredient Focal Point: D  
NIOSH (RTECS) Number: 1002590PA  
CAS Number:  
OSHA PEL: N/K  
ACGIH TLV: N/K  
Other Recommended Limit: 100 PPM

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Proprietary: NO  
Ingredient: OLEFINS  
Ingredient Sequence Number: 04  
Percent: 17  
Ingredient Action Code:  
Ingredient Focal Point: D  
NIOSH (RTECS) Number: 10007950L  
CAS Number:  
OSHA PEL: N/K  
ACGIH TLV: N/K

Report for NIIN: 001487103

Other Recommended Limit: 100 PPM

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Proprietary: NO  
Ingredient: NAPHTHENES  
Ingredient Sequence Number: 05  
Percent: 8  
Ingredient Action Code:  
Ingredient Focal Point: D  
NIOSH (RTECS) Number: 1000794NA  
CAS Number:  
OSHA PEL: N/K  
ACGIH TLV: N/K  
Other Recommended Limit: 100 PPM  
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Proprietary: NO  
Ingredient: OTHER AEROMATIC HYDROCARBONS  
Ingredient Sequence Number: 06  
Percent: 27  
Ingredient Action Code:  
Ingredient Focal Point: D  
NIOSH (RTECS) Number: 1000007AH  
CAS Number:  
OSHA PEL: N/K  
ACGIH TLV: N/K  
Other Recommended Limit: 100 PPM  
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Physical/Chemical Characteristics

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Appearance And Odor: CLEAR,COLORLESS TO STRAW YELLOW LIQUID;GASOLINE ODOR  
Boiling Point: 85F  
Melting Point: N/K  
Vapor Pressure (MM Hg/70 F): N/K  
Vapor Density (Air=1): 3.5 (AIR)  
Specific Gravity: 0.72 - 0.76  
Decomposition Temperature: N/K  
Evaporation Rate And Ref: N/K  
Solubility In Water: NEGLIGIBLE  
Percent Volatiles By Volume: 100  
Viscosity:  
pH: N/K  
Radioactivity:  
Form (Radioactive Matl):  
Magnetism (Milligauss): N/P  
Corrosion Rate (IPY):  
Autoignition Temperature: >536F  
=====

Fire and Explosion Hazard Data

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Flash Point: -40F  
Flash Point Method: N/P  
Lower Explosive Limit: 1.3  
Upper Explosive Limit: 7.6  
Extinguishing Media: DRY CHEMICAL,CARBON DIOXIDE,FOAM,WATER FOG. WATER MAY

BE INEFFECTIVE, AS PRODUCT WILL FLOAT AND MAY SPREAD FIRE.  
Special Fire Fighting Proc: WEAR SELF CONTAINED BREATHING APPARATUS IN  
CLOSED AREAS. WATER SPRAY MAY BE USED TO COOL FIRE EXPOSED CONTAINERS.  
Unusual Fire And Expl Hazrds: VAPORS ARE HEAVIER THAN AIR, ACCUMULATING IN  
LOW AREAS, TRAVELING ALONG GROUND AND MAY FLASH BACK FROM DISTANT IGNITION  
SOURCE.

=====  
Reactivity Data  
=====

Stability: YES  
Cond To Avoid (Stability): HEAT, SPARKS AND OTHER IGNITION SOURCES, VAPOR  
ACCUMULATIONS.  
Materials To Avoid: STRONG OXIDIZERS  
Hazardous Decomp Products: CARBON DIOXIDE, CARBON MONOXIDE  
Hazardous Poly Occur: NO  
Conditions To Avoid (Poly): N/R  
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Health Hazard Data  
=====

LD50-LC50 Mixture: ORAL RAT LD50 18,800 MG/KG  
Route Of Entry - Inhalation: YES  
Route Of Entry - Skin: NO  
Route Of Entry - Ingestion: NO  
Health Haz Acute And Chronic: PRODUCT IS IRRITATING TO EYES, SKIN,  
RESPIRATORY TRACT AND DEPRESSES THE CENTRAL NERVOUS SYSTEM. CHRONIC OVER  
EXPOSURE MAY CAUSE LIVER, KIDNEY, OR CENTRAL NERVOUS SYSTEM DAMAGE.  
Carcinogenicity - NTP: YES  
Carcinogenicity - IARC: YES  
Carcinogenicity - OSHA: YES  
Explanation Carcinogenicity: CONTAINS BENZENE; LISTED BY ALL THREE. ALSO,  
AN API STUDY FOUND LIVER CANCER IN MICE EXPOSED TO GASOLINE VAPORS.  
Signs/Symptoms Of Overexp: EYE/SKIN CONTACT: TRANSITORY IRRITATION.  
INHALED: RESPIRATORY IRRITATION, CENTRAL NERVOUS SYSTEM DEPRESSION INCLUDING,  
EUPHORIA, HEADACHE, DIZZINESS, DROWINESS, FATIGUE, TREMORS, CONVULSION, NAUSEA,  
VOMITING, DIARRHEA, LOSS OF CONSCIOUSNESS. AND FINALLY DEATH. INGESTED: G/I  
IRRITATION, PLUS SYMPTOMS SIMILAR TO THOSE UNDER "INHALED".  
Med Cond Aggravated By Exp: PRE-EXISTING EYE, SKIN CONDITIONS OR IMPAIRED  
LIVER, KIDNEY FUNCTION MAY BE AGGRAVATED BY THIS PRODUCT.  
Emergency/First Aid Proc: EYE: FLUSH WITH WATER 15 MIN. SKIN: WASH WITH SOAP  
& WATER. REMOVE CONTAMINATED CLOTHING; LAUNDRY BEFORE REUSE. INHALED: REMOVE  
TO FRESH AIR. RESUSCITATE OR GIVE OXYGEN AS NEEDED. GET MEDICAL ATTENTION.  
DO NOT INDUCE VOMITING. IF VOMITING OCCURS, MINIMIZE ASPIRATION HAZARD.  
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=====  
Precautions for Safe Handling and Use  
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Steps If Matl Released/Spill: ELIMINATE IGNITION SOURCES. ISOLATE AREA.  
USE PROTECTIVE EQUIPMENT AS NECESSARY. STOP LEAK AND CONTAIN SPILL. DIKE AS  
NEEDED TO KEEP SPILL FROM DRAINS, WATERS ETC. WATER FOG MAY BE USED TO  
REDUCE VAPORS & PERSONAL HAZARD. REPORT SPILL PER LAW.  
Neutralizing Agent: NONE  
Waste Disposal Method: DISPOSE I/A/W FEDERAL, STATE, LOCAL REGULATIONS.  
PRODUCT QUALIFYS AS IGNITABLE WASTE AND CANNOT BE LANDFILLED. IF RECOVERY  
OR RECYCLE ARE UNACCEPTABLE, INCINERATION MAY BE ACCEPTABLE DISPOSAL METHOD.

Report for NIIN: 001487103

Precautions-Handling/Storing: STORE IN A COOL, DRY, ISOLATE, WELL VENTILATED  
A. KEEP IGNITION SOURCES AWAY. GROUND CONTAINERS TO PREVENT STATIC  
DISCHARGE DURING TRANSFERS.

Other Precautions: FIRE AND EXPLOSION ARE THE ACUTE HAZARDS OF THIS  
+PRODUCT. TAKE EXTRAORDINARY STEPS TO PREVENT THEM.

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#### Control Measures

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Respiratory Protection: IF NEEDED, USE NIOSH/MSHA RESPIRATOR WITH ORGANIC  
VAPOR CARTRIDGE OR PREFERABLY, A POSITIVE PRESSURE AIR SUPPLIED RESPIRATOR  
OR SELF CONTAINED BREATHING APPARATUS.

Ventilation: USE EXPLOSION PROOF VENTILATION EQUIPMENT TO MAINTAIN  
EXPOSURE BELOW PEL/TVL

Protective Gloves: IMPERVIOUS RUBBER OR POLYMER.

Eye Protection: SAFETY GLASSES, OR SPLASH GOGGLES.

Other Protective Equipment: SAFETY SHOWER/EYE WASH. WORK CLOTHING AS  
NEEDED TO PROTECT FROM PROLONGED/REPEATED CONTACT.

Work Hygienic Practices: USE GOOD CHEMICAL HYGIENE PRACTICE. AVOID  
UNNECESSARY CONTACT. MINIMIZE ALL CONTACT.

Suppl. Safety & Health Data:

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DOD Hazardous Materials Information System

DoD 6050.5-LR

AS OF October 1995

Proprietary Version - For U.S. Government Use Only

FSC: 9140

NIIN: 00F008805

Manufacturer's CAGE: 58326

Part No. Indicator: A

Part Number/Trade Name: 2 FUEL OIL

General Information

Item Name: DIESEL FUEL

Company's Name: CONOCO INC.

Company's Street: N/K

Company's P. O. Box: 1267

Company's City: PONCA CITY

Company's State: OK

Company's Country:

Company's Zip Code: 74603

Company's Emerg Ph #: (800) 424-9300

Company's Info Ph #: (405) 767-6000

Distributor/Vendor # 1:

Distributor/Vendor # 1 Cage:

Distributor/Vendor # 2:

Distributor/Vendor # 2 Cage:

Distributor/Vendor # 3:

Distributor/Vendor # 3 Cage:

Distributor/Vendor # 4:

Distributor/Vendor # 4 Cage:

Safety Data Action Code:

Safety Focal Point: F

Record No. For Safety Entry: 001

Tot Safety Entries This Stk#: 001

Status:

Date MSDS Prepared: 29MAY87

Safety Data Review Date: 26JUL89

Supply Item Manager:

MSDS Preparer's Name:

Preparer's Company: CONOCO INC.

Preparer's St Or P. O. Box: N/K

Preparer's City: PONCA CITY

Preparer's State: OK

Preparer's Zip Code: 74603

Other MSDS Number:

MSDS Serial Number: BHBPH

Specification Number:

Spec Type, Grade, Class:

Hazard Characteristic Code:

Unit Of Issue:

Unit Of Issue Container Qty:

Type Of Container:

Net Unit Weight:

Report for NIIN: 00F008805

NRC/State License Number:  
Net Explosive Weight:  
Net Propellant Weight-Ammo:  
Coast Guard Ammunition Code:

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Ingredients/Identity Information

=====

Proprietary: NO  
Ingredient: DIESEL FUELS  
Ingredient Sequence Number: 01  
Percent: N/K  
Ingredient Action Code:  
Ingredient Focal Point: F  
NIOSH (RTECS) Number: HZ1800000  
CAS Number: 68334-30-5  
OSHA PEL: N/K  
ACGIH TLV: N/K  
Other Recommended Limit: N/K

=====

Physical/Chemical Characteristics

=====

Appearance And Odor: CLEAR OR LIGHT YELLOW LIQUID; AROMATIC ODOR.  
Boiling Point: 350-680F  
Melting Point: N/R  
Vapor Pressure (MM Hg/70 F): 1  
Vapor Density (Air=1): N/R  
Specific Gravity: 0.93  
Decomposition Temperature: N/R  
Evaporation Rate And Ref: N/R  
Solubility In Water: INSOLUBLE  
Percent Volatiles By Volume: NIL  
Viscosity:  
pH: N/R  
Radioactivity:  
Form (Radioactive Matl):  
Magnetism (Milligauss):  
Corrosion Rate (IPY): N/R  
Autoignition Temperature:

=====

Fire and Explosion Hazard Data

=====

Flash Point: 130F  
Flash Point Method: TCC  
Lower Explosive Limit: 0.4%  
Upper Explosive Limit: 6%  
Extinguishing Media: USE WATER SPRAY, DRY CHEMICAL, FOAM, CO2  
Special Fire Fighting Proc: USE WATER TO KEEP CONTAINERS COOL. IF SPILL  
HASN'T IGNITED. USE WATER SPRAY TO DISPERSE VAPORS/PROVIDE PROTECTION FOR  
PERSONNEL ATTEMPTING TO STOP A LEAK.  
Unusual Fire And Expl Hazrds: DON'T ENTER ENCLOSED OR CONFINED SPACE  
WITHOUT PROPER PROTECTIVE EQUIPMENT INCLUDING RESPIRATORY PROTECTION.

=====

Reactivity Data

=====

Stability: YES  
Cond To Avoid (Stability): HEAT, FLAME.  
Materials To Avoid: OXIDIZING MATERIALS.  
Hazardous Decomp Products: INCOMPLETE COMBUSTION MAY PRODUCE CO.  
Hazardous Poly Occur: NO  
Conditions To Avoid (Poly): N/R

=====

Health Hazard Data

=====

LD50-LC50 Mixture: N/K  
Route Of Entry - Inhalation: YES  
Route Of Entry - Skin: YES  
Route Of Entry - Ingestion: NO  
Health Haz Acute And Chronic: EYES/LUNGS/SKIN: MAY CAUSE IRRITATION.  
INGESTION: ASPIRATION INTO THE LUNGS MAY CAUSE PNEUMONIA OR CENTRAL NERVOUS  
SYSTEM DEPRESSION. INHALATION: WEAKNESS, DIZZINESS, UNCONSCIOUSNESS OR  
CONVULSIONS. PETROLEUM DISTILLATES HAVE CAUSED KIDNEY DAMAGE & KIDNEY OR  
LIVER TUMORS.  
Carcinogenicity - NTP: NO  
Carcinogenicity - IARC: NO  
Carcinogenicity - OSHA: NO  
Explanation Carcinogenicity: NONE  
Signs/Symptoms Of Overexp: EYES/LUNGS/SKIN: MAY CAUSE IRRITATION.  
INGESTION: ASPIRATION INTO THE LUNGS MAY CAUSE PNEUMONIA OR CENTRAL NERVOUS  
SYSTEM DEPRESSION. INHALATION: WEAKNESS, DIZZINESS, UNCONSCIOUSNESS OR  
CONVULSIONS. PETROLEUM DISTILLATES HAVE CAUSED KIDNEY DAMAGE & KIDNEY OR  
LIVER TUMORS.  
Med Cond Aggravated By Exp: N/K  
Emergency/First Aid Proc: INGESTION: DON'T INDUCE VOMITING. IF VOMITING  
BEGINS, LOWER VICTIM'S HEAD IN AN EFFORT TO PREVENT VOMITUS FROM ENTERING  
LUNGS. SEEK MEDICAL ATTENTION. NEVER GIVE ANYTHING BY MOUTH TO AN  
UNCONSCIOUS PERSON. EYES: FLUSH W/WATER AT LEAST 15 MIN. CALL PHYSICIAN.  
SKIN: WASH W/SOAP & WATER. INHALATION: REMOVE TO FRESH AIR.

=====

Precautions for Safe Handling and Use

=====

Steps If Matl Released/Spill: MATERIAL IS COMBUSTIBLE. CONTAIN SPILL IN  
SMALLEST AREA. RECOVER AS MUCH PRODUCT AS POSSIBLE BY VACUUMING/SOAKING UP  
RESIDUAL FLUIDS W/ABSORBENT MATERIALS. REMOVE CONTAMINATED SOIL/PLACE IN  
PROPER CONTAINERS. AVOID WASHING/DRAINING TO STORM SEWERS.  
Neutralizing Agent: N/R  
Waste Disposal Method: RECYCLE AS MUCH OF THE RECOVERABLE PRODUCT AS  
POSSIBLE. DISPOSE OF NONRECYCLABLE MATERIAL AS RCRA HAZARDOUS WASTE BY SUCH  
METHODS AS INCINERATION, COMPLYING W/FEDERAL, STATE & LOCAL REGULATIONS.  
Precautions-Handling/Storing: MINIMIZE EXPOSURE. PRODUCT CONTAINS  
HYDROCARBONS WHICH MAY CAUSE IRRITATION TO EYES, LUNGS, OR SKIN AFTER  
PROLONGED/REPEATED EXPOSURE.  
Other Precautions: PRODUCT IS CLASS II COMBUSTIBLE LIQUID PER NFPA CODE  
30-1984. STORE & HANDLE ACCORDINGLY.

=====  
Control Measures  
=====

Respiratory Protection: USE AIR MASK OR HYDROCARBON ABSORBING RESPIRATOR  
WHEN EXPOSED TO OIL SPRAY OR MISTS.

Ventilation: GENERAL MECHANICAL VENTILATION IS NORMALLY ADEQUATE.

Protective Gloves: RESISTANT

Eye Protection: FACE SHIELD

Other Protective Equipment: COVERALLS OR OTHER PROTECTIVE APPAREL NEEDED  
IF SPLASHING IS PROBABLE.

Work Hygienic Practices: LAUNDER CONTAMINATED CLOTHING BEFORE REUSE.  
CONTAMINATED LEATHER SHOES SHOULD BE DISCARDED.

Suppl. Safety & Health Data: N/R

**TAB 12 — PLAN REVIEW AND UPDATE**

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12.2	Plan Amendments .....	FRP: TAB 12-1
12.3	Amendments Submittal .....	FRP: TAB 12-2

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## **TAB 12 – PLAN REVIEW AND UPDATE**

### **12.0 PLAN REVIEW AND UPDATE**

#### **12.1 Plan Reviews**

Facility response plans must be reviewed at least annually. The review shall incorporate any changes in the list of economically important or environmentally sensitive areas identified in the ACP in effect six months before to plan review.

- The review must occur within one month of the anniversary date of EPA approval of the plan.
- After the review, if changes are needed, a plan amendment must be submitted to the EPA for review or approval.
- Any required changes must be entered in the plan and noted on the record-of-changes page. No deadline for plan amendment is given in the regulation, but since there is a requirement for an annual review, it is recommended that amendments be completed three months before submitting the plan for review.

#### **12.2 Plan Amendments**

##### **U.S. Environmental Protection Agency (EPA)**

The owner or operator of a facility for which a response plan is required shall revise and resubmit revised portions of the response plan within 60 days of each facility change that materially may affect the response to a worst case discharge, including:

- A change in the facility's configuration that materially alters the information included in the response plan;
- A change in the type of oil (persistent or nonpersistent) handled, stored, or transported that materially affects the required response resources;
- A material change in the capabilities of the oil spill removal organization(s) (OSROs) that provide equipment and personnel to respond to discharges of oil described in Response Planning levels (small, medium and worst-case discharge);
- A material change in the facility's spill prevention and response equipment or emergency response procedures;
- Any other changes that materially affect the implementation of the response plan; or
- Five years from the date of EPA approval.

**Note:** Except as provided above, amendments to personnel and telephone number lists included in the response plan and a change in the oil spill removal organization(s) that does not result in a material change in support capabilities do not require approval of EPA.

### **12.3 Amendment Submittal**

Amended plans should be distributed to all person, regulatory agencies, facilities, and NAS Corpus Christi having a need to hold a copy of this plan.

**TAB 13 — NATURAL RESOURCE DAMAGE ASSESSMENT**

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## **TAB 13 — NATURAL RESOURCE DAMAGE ASSESSMENT**

### **13.0 BACKGROUND**

Due to NAS Corpus Christi's proximity to shoreline environments, abundant and fragile natural resources are potentially at stake. OPA 90 provides for the prevention of, and liability for removal and compensation for the discharge of oil into or upon navigable waters, adjoining shorelines, or the Exclusive Economic Zone. OPA 90 also provides for the designation of federal, state, tribal, and foreign officials to act on behalf of the public as trustee(s) for natural resources. If natural resources are injured, lost, destroyed, or the loss of use of natural resources occurs as a result of a discharge of oil covered by OPA 90, these officials are authorized to assess natural resource damages, present a claim for those damages, and develop and implement a plan for the restoration, rehabilitation, replacement, or acquisition of the equivalent of the natural resources under their trusteeship.

Navy guidelines and policy are being developed to address Natural Resources Damage Assessment (NRDA) requirements under OPA 90. Until these guidelines and policy are established, Facility Incident Commanders (FICs) should review OPA 90, the National Oil and Hazardous Substances Contingency Plan (NCP), the National Oceanic and Atmospheric Administration (NOAA) proposed rule and OPNAVINST 5090.1B (when available) to become familiar with the general requirements of NRDA. Should a spill requiring an NRDA occur prior to development of the Navy guidance document, the FIC should contact the following person for assistance:

The Navy contact for NRDA information/questions is:

CDR. John Quinn  
CNO Environmental Protection  
JAG-C Environmental Counsel (Code N45)  
(703) 602-3028

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**TAB 14 — EPA COVER SHEET**

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**TAB 14 — EPA COVER SHEET**

**14.0 EPA COVER SHEET**

<b>EPA RESPONSE PLAN COVER SHEET</b>
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EPA regulations, 40 CFR 112, Appendix G, requires that all facility response plan submittals contain a completed Response Plan Cover Sheet. The EPA Response Plan Cover Sheet submitted in January 1995 follows this page.

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# EPA RESPONSE PLAN COVER SHEET

## General Information

Owner/Operator of Facility:

Facility Name: Naval Air Station Corpus Christi

Facility Address (street or route):

Naval Air Station Corpus Christi, 11001 D Street, Suite 143

City, State, and U.S. Zip Code:

Corpus Christi, Texas 78419-5021

Facility Phone No: (512) 939-2123

Latitude (Degrees: North): 27° 42' 30" North

Longitude (Degrees: West): 97° 17' 30" West

Dun & Bradstreet Number: --

Standard Industrial Classification (SIC) Code: 9711  
(National Security)

Largest Aboveground Oil Storage Tank Capacity (Gallons): 400,000

Number of Aboveground Oil Storage Tanks: 35

Maximum Oil Storage Capacity (Gallons): 1,545,450

Facility Distance to Navigable Water. Mark the appropriate line:

0 - 1/4 mile \_\_\_\_\_ 1/4 - 1/2 mile XXX

1/2 - 1 mile \_\_\_\_\_ > 1 mile \_\_\_\_\_

## Applicability of Substantial Harm Criteria

Does the facility transfer oil over-water to or from vessels and does the facility have a total oil storage capacity greater than or equal to 42,000 gallons?

Yes XXX No \_\_\_\_\_



Does the facility have a total storage capacity greater than or equal to 1 million gallons and, within any storage area, does the facility lack secondary containment that is sufficiently large to contain the capacity of the largest aboveground oil storage tank plus sufficient freeboard to allow for precipitation?

Yes **XXX** No \_\_\_\_\_

Does the facility have a total oil storage capacity greater than or equal to 1 million gallons and is the facility located at a distance (as calculated using the appropriate formula in Appendix C or a comparable formula) such that a discharge from the facility could cause injury to fish and wildlife and sensitive environments?

Yes **XXX** No \_\_\_\_\_

Does the facility have a total oil storage capacity greater than or equal to 1 million gallons and is the facility located at a distance (as calculated using the appropriate formula in Appendix C or a comparable formula) such that a discharge from the facility would shut down a public drinking water intake?

Yes \_\_\_\_\_ No **XXX**

Does the facility have a total oil storage capacity greater than or equal to 1 million gallons and has the facility experienced a reportable oil spill in an amount greater than or equal to 10,000 gallons within the last 5 years?

Yes \_\_\_\_\_ No **XXX**

#### Certification

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document, and that based on my inquiry of those individuals responsible for obtaining information, I believe that the submitted information is true, accurate, and complete.

Signature: F. W. Montesano

Name (Please type or print): F. W. Montesano, Captain, U.S.N.

Title: Commanding Officer, NAS Corpus Christi

Date: 2/10/95

**TAB 15 — DEFINITIONS**

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## **TAB 15 — DEFINITIONS**

### **15.0 DEFINITIONS**

This is a listing of definitions associated with oil and hazardous substance response. Many are not used in this plan, but may be of use to responders.

#### ***Adverse Weather:***

The weather conditions that make it difficult for response equipment and personnel to clean up or remove spilled oil.

These weather conditions will be considered when identifying response systems and equipment in a response plan for the applicable operating environment. Factors to consider include significant wave height, ice conditions, temperatures, weather-related visibility, and currents within the U.S. Coast Guard Captain of the Port zone in which the systems or equipment are intended to function.

The weather conditions considered by the operator in identifying the response systems and equipment to be deployed in accordance with a response plan, including wave height, ice, temperature, visibility, and currents within the inland or Coastal Response Zone (as defined in the National Contingency Plan [40 CFR 300]) in which those systems or equipment are intended to function.

#### ***Alteration:***

Any work on a tank or related equipment involving cutting, burning, welding, or heating operations that changes the physical dimensions or configuration of a tank.

#### ***Branch:***

The organizational level having functional/geographic responsibility for major segments of the incident operations. The branch level is organizationally between the section and division/group.

#### ***Breakout Tank:***

A tank used to:

- relieve surges in an oil pipeline system or
- receive and store oil transported by a pipeline for reinjection and continued transportation by pipeline.

#### ***Captain of the Port (COTP) Zone:***

A zone specified in 33 CFR Part 3 and, where applicable, the seaward extension of that zone to the outer boundary of the Exclusive Economic Zone (EEZ).

#### ***Coastal Zone:***

All United States waters subject to the tide, United States waters of the Great Lakes and Lake Champlain, specified ports and harbors on inland rivers, waters of the contiguous zone, other waters of the high seas subject to the National Contingency Plan, and the land surface or land substrate groundwaters, and ambient air proximal to those waters. (The term "coastal zone" delineates an area

of federal responsibility for response action. Precise boundaries are determined by agreement between the Environmental Protection Agency and the U.S. Coast Guard and are identified in Federal Regional Contingency Plans and Area Contingency Plans.)

***Compensable values:***

The values that humans have for services provided by resources including, but not limited to, commercial, ecological, special significance, and passive uses.

***Complex Facility:***

A facility possessing a combination of transportation-related and non-transportation-related components that are subject to their jurisdiction of more than one federal agency under Section 311(j) of the Clean Water Act.

***Contracts or other approved means:***

- A written contractual agreement with a response contractor that identifies and ensures the availability of the necessary personnel or equipment within appropriate response times;
- A written certification by the owner or operator that the necessary personnel and equipment resources, owned or operated by the facility owner or operator, are available to respond to a discharge within appropriate response times;
- Active membership in a local or regional oil spill removal organization that has identified and ensures adequate access through such membership to necessary personnel and equipment to respond to a discharge within appropriate response times in the specified geographic areas; or
- Other specific arrangements approved by the EPA Regional Administrator upon request of the owner or operator.

***Damages:***

The amount of money calculated to compensate for injury to, destruction of, loss or use of natural resources, including the reasonable costs of assessing or determining the damage, which shall be recoverable by the United States, state, Indian tribe, or a foreign trustee.

***Discharge:***

- ***Average Most Probable:*** [USCG] A discharge of the lesser of 50 barrels or 1% of the volume of the worst-case discharge.
- ***Maximum Most Probable:*** [USCG] A discharge of the lesser of 1,200 barrels or 10% of the volume of a worst-case discharge.
- ***Medium Spill:*** [EPA] Any spill volume greater than a small spill but equal to or less than 36,000 gallons or 10% of the capacity of the largest aboveground storage tank, whichever is less.
- ***Small Spill:*** [EPA] Any spill volume less than or equal to 2,100 gallons but not to exceed the calculated worst-case discharge.

• ***Worst-Case:***

**[EPA]** For an onshore non-transportation-related facility, the largest foreseeable discharge in adverse weather conditions, based on the factors described in Appendix E to 40 CFR Part 112.

**[RSPA]** The largest foreseeable discharge of oil, including a discharge from fire or explosion in adverse weather conditions. This volume will be determined by each pipeline operator for each response zone and is determined as follows:

The pipeline's maximum release in time expressed in hours, plus the maximum shutdown response time in hours (based on historic discharge data or in the absence of such data, the operator's best estimate) multiplied by the maximum flow rate expressed in barrels per hour (based on the maximum daily capacity of the pipeline), plus the largest line drainage volume after shutdown of the line section(s) in the response zone expressed in barrels; or

The largest foreseeable discharge for the line section(s) within a response zone, expressed in barrels, based on the maximum historic discharge, if one exists, adjusted for any subsequent corrective or preventive action taken; or

If the response zone contains one or more breakout tanks, the capacity of the single largest tank or battery of tanks within a single secondary containment system adjusted for the capacity or size of the secondary containment system, expressed in barrels.

**[USCG]** For an on shore facility and deepwater port, the largest foreseeable discharge in adverse weather conditions meeting the following requirements:

The loss of the entire capacity of all in-line and breakout tank(s) needed for the continuous operation of the pipelines used for the purposes of handling or transporting oil, in bulk to or from a vessel regardless of the presence of secondary containment; plus

The discharge from all piping carrying oil between the marine transfer manifold and the non-transportation-related portion of the facility. The discharge from each pipe is calculated as follows: The maximum time to discover the release from the pipe in hours, plus the maximum time to shut down flow from the pipe in hours (based on historic discharge data or the best estimate in the absence of historic discharge data for the facility) multiplied by the maximum flow rate expressed in barrels per hour (based on the maximum relief valve setting or maximum system pressure when relief valves are not provided) plus the total line drainage volume expressed in barrels for the

pipe between the marine manifold and the non-transportation-related portion of the facility; and

For a mobile facility, the loss of the entire contents of the container in which the oil is stored or transported.

***Emergency Response Coordinator (ERC):***

The EPA proposed OPA 90 regulations use the term to indicate the person responsible for facility oil spill response coordination. In this plan the ERC and the Incident commander -will be used interchangeably. (See Facility Incident Commander and Regional Incident Commander for definition.)

***Environmentally Sensitive Area:***

An area of environmental importance which is in or adjacent to navigable waters.

***Exclusive Economic Zone:***

The zone contiguous to the territorial sea of the United States extending to a distance up to 200 nautical miles from the baseline from which the breadth of the territorial sea is measured.

***Facility Incident Commander:***

The individual who is responsible for the management of incident operations up to the limits of the facility to respond. Under Navy policy the FIC and Facility Qualified Individual will be designated the same person.

***Facility Qualified Individual:***

The English-speaking representative of the facility (base), located in the United States, available on a 24-hour basis, with full authority to: activate and contract with required oil spill removal organization(s); activate personnel and equipment maintained by the operator; act as liaison with the OSC; and obligate any funds required to carry out all required or directed oil spill activities. Under Navy policy, the FQI and FIC will be the same person.

***Facility that could reasonably be expected to cause significant and substantial harm:***

[EPA] Any facility that has the potential to cause substantial harm as determined by the EPA Regional Administrator considers the following additional factors:

- Proximity to environmental areas of concern defined in 40 CFR 112, Appendix D;
- Frequency of past spills;
- Proximity to navigable waters;
- Age of oil storage tanks; and
- Other facility-specific and region-specific impacts on public health.

**[RSPA]** Any pipeline that is greater than 6% inches in outside nominal diameter, greater than 10 miles in length, and the line section:

- Has experienced a release greater than 1,000 barrels within the previous five years,
- Has experienced two or more reportable releases, as defined in 49 CFR 195.50, within the previous five years,
- Contains any electric resistance welded pipe, manufactured prior to 1970, operates at a maximum operating pressure established under 49 CFR 195.406 that corresponds to a stress level greater than 50% of the specified minimum yield strength of the pipe,
- Is within a five-mile radius of potentially affected public drinking water intakes and could reasonably be expected to reach public drinking water intakes, or
- Is within a one-mile radius of potentially affected environmentally sensitive areas, and could reasonably be expected to reach these areas.

**[USCG]** Any marine transportation-related facility (including piping and any structures that are used for the transfer of oil between a vessel and the facility) classified as a "significant and substantial harm" facility under 33 CFR 154.1015 (c) including a facility specifically designated by the COTP under 33 CFR 154.1016(a).

***Facility that could reasonably be expected to cause substantial harm:***

**[EPA]**

- (1) A facility that transfers oil over water to or from vessels and has a total storage capacity greater than or equal to 42,000 gallons; or
- (2) A facility with a total oil storage capacity greater than or equal to 1 million gallons and one of the following is true:
  - The facility does not have secondary containment for each aboveground storage area sufficiently large to contain the capacity of the largest aboveground storage tank within each storage area;
  - The facility is at a distance (as calculated using the appropriate formula in 40 CFR 112 Attachment C-III or an alternative formula considered acceptable by the Regional Administrator such that a discharge from the facility could cause injury to an environmentally sensitive area as defined in 40 CFR 112 Appendix D;
  - The facility is at a distance (as calculated using the appropriate formula in 40 CFR 112 Attachment C-III or an alternative formula) considered acceptable by the Regional Administrator such that a discharge from the facility would shut down a public drinking water intake; or
  - The facility has had a reportable spill in an amount greater than or equal to 10,000 gallons within the last five years.

**[RSPA]**

Not defined.

**[USCG]**

Any marine transportation-related facility classified as a "substantial harm" facility under 33 CFR 154.1015(b) including a facility specifically designated by the COTP under 33 CFR 154.1016(a).

***Federal On-Scene Coordinator (FOSC):***

The Federal Official designated by the Administrator of the EPA or by the Commandant of the USCG to coordinate and direct federal response under subpart D of the National Contingency Plan (40 CFR Part 300). The DOD is designated as the FOSC for all DOD hazardous substance spill response.

***Great Lakes:***

Lakes Superior, Michigan, Huron, Erie, and Ontario, their connecting and tributary waters, the Saint Lawrence River as far as Saint Regis, and adjacent port areas.

***Group:***

A functional division (e.g., security, search and rescue)

***High Volume Area:***

An area where an oil pipeline having a nominal outside diameter of 20 inches or more crosses a major river or other navigable water, which, because of the velocity of the river flow and vessel traffic on the river, would require a more rapid response in case of a worst-case discharge or substantial threat of such a discharge. Appendix B to 49 CFR Part 194 lists of some of the high-volume areas in the United States.

***High-Volume Areas:***

49 CFR 194 Appendix B

Major River	Nearest Town and State
Arkansas River	N. Little Rock, AR
Arkansas River	Jenks, OK
Arkansas River	Little Rock, AR
Black Warrior River	Moundville, AL
Black Warrior River	Akron, AL
Brazos River	Glen Rose, TX
Brazos River	Sealy, TX
Catawba River	Mount Holly, NC
Chattahoochee River	Sandy Springs, GA
Colorado River	Yuma, AZ

Major River	Nearest Town and State
Colorado River	LaPaz, AZ
Connecticut River	Lancaster, NH
Coosa River	Vincent, AL
Cumberland River	Clarksville, TN
Delaware River	Frenchtown, NJ
Delaware River	Lower Chichester, NJ
Gila River	Gila Bend, AZ
Grand River	Bosworth, MO
Illinois River	Chillicothe, IL
Illinois River	Havana, IL
James River	Arvonias, VA
Kankakee River	Kankakee, IL
Kankakee	South Bend, IN
Kankakee River	Wilmington, IL
Kentucky River	Salvisa, KY
Kentucky River	Worthville, KY
Maumee River	Defiance, OH
Maumee River	Toledo, OH
Mississippi River	Myrtle Grove, LA
Mississippi River	Woodriver, IL
Mississippi River	Chester, IL
Mississippi River	Cape Girardeau, MO
Mississippi River	Woodriver, IL
Mississippi River	St. James, LA
Mississippi River	New Roads, LA
Mississippi River	Ball Club, LA
Mississippi River	Mayersville, MS
Mississippi River	New Roads, LA
Mississippi River	Quincy, IL
Mississippi River	Ft. Madison, IA
Missouri River	Waverly, MO
Missouri River	St. Joseph, MO
Missouri River	Weldon Springs, MO

Major River	Nearest Town and State
Missouri River	New Frankfort, MO
Neches River	Beaumont, TX
Ohio River	Joppa, IL
Ohio River	Cincinnati, OH
Ohio River	Owensboro, KY
Pascagoula River	Lucedale, MS
Pascagoula River	Wiggins, MS
Pearl River	Columbia, MS
Pearl River	Oria, TX
Platte River	Ogallala, NE
Potomac River	Reston, VA
Rappahannock River	Midland, VA
Raritan River	South Bound Brook, NJ
Raritan River	Highland Park, NJ
Red River (of the South)	Hanna, LA
Red River (of the South)	Bonham, TX
Red River (of the South)	Dekalb, TX
Red River (of the South)	Sentell Plantation, LA
Red River (of the North)	Wahpeton, ND
Rio Grande	Anthony, NM
Sabine River	Edgewood, TX
Sabine River	Leesville, LA
Sabine River	Orange, TX
Sabine River	Echo, TX
Savannah River	Hartwell, GA
Smokey Hill River	Abilene, KS
Susquehanna River	Darlington, MD
Tennessee River	New Johnsonville, TN
Wabash River	Harmony, IN
Wabash River	Terre Haute, IN
Wabash River	Mt. Carmel, IL
White River	Batesville, AR
White River	Grand Glaize, AR

Major River	Nearest Town and State
Wisconsin River	Wisconsin Rapids, WI
Yukon River	Fairbanks, AK

***Higher Volume Port Areas:***

33 CFR 154.10206 & 40 CFR 112 Appendix C

(1) Boston, MA; (2) New York, NY; (3) Delaware Bay and River to Philadelphia, PA; (4) St. Croix, VI; (5) Pascagoula, MS; (6) Mississippi River from Southwest Pass, LA, to Baton Rouge, LA; (7) Louisiana Offshore Oil Port, LA; (8) Lake Charles, LA; (9) Sabine-Neches River, TX; (10) Galveston Bay and Houston Ship Channel, TX; (11) Corpus Christi, TX; (12) Los Angeles/Long Beach Harbor, CA; (13) San Francisco Bay, San Pablo Bay, Carquinez Strait, and Suisun Bay to Antioch CA; (14) Straits of Juan De Fuca from Port Angeles, WA, to and including Puget Sound, WA; (15) Prince William Sound, AK, and others as specified by the EPA regional Administrator

***Incident Action Plan:***

The plan, which is initially prepared at the first staff meeting after an oil spill occurs, that contains the general control objectives reflecting the overall strategy, and specific action plans for the next operational period. When complete, the incident action plan will have a number of attachments.

***Incident Command System:***

A system for controlling personnel, facilities, equipment, and communications during emergency response. The system is designed to begin developing from the time an incident occurs until the requirement for management and operations no longer exists. This system can be used for any type or size emergency, ranging from a minor spill to a major emergency response. It also allows for the timely combining of resources from different agencies/contractors.

***Injury:***

A measurable adverse change, either long or short term, in the chemical or physical quality or the viability of a natural resource resulting either directly or indirectly from exposure to a discharge of oil.

***Inland Area:***

The area shoreward of the boundary lines defined in 46 CFR Part 7, except in the Gulf of Mexico. In the Gulf of Mexico, the area shoreward of the lines of demarcation (COLREG lines) defined in 33 CFR § 80.740 through 80.850. The inland area does not include the Great Lakes.

***Inland Zone:***

The environment inland of the coastal zone excluding the Great Lakes, Lake Champlain, and specified ports and harbors on inland rivers. (The term inland zone delineates an area of federal responsibilities for response actions. Precise boundaries are determined by agreements between the Environmental Protection Agency and U.S. Coast Guard and are identified in the Federal Regional Contingency Plans.)

***Line Section:***

A continuous run of pipe that is contained between adjacent pressure pump station, between a pressure pump station and a terminal or breakout tank, between a pressure pump station and a block valve, or between adjacent block valves.

***Major River:***

A river that because of its velocity and vessel traffic, would require a more rapid response in case of a worst-case discharge. For a list of rivers see "*Rolling Rivers, An Encyclopedia of America's Rivers*", Richard A Bartlett, Editor, McGraw-Hill Book Company, 1984.

***Marine Transportation-Related Facility:***

Any offshore facility or segment of a complex regulated under Section 311(j) of the Federal Water Pollution Control Act (FWPCA) by two or more federal agencies including piping and any structure used or intended to be used to transfer oil to or from a vessel, subject to regulation under 33 CFR. For a facility or segment of a complex regulated by two or more federal agencies under Section 311(j) of the FWPCA, the marine transportation-related portion of the complex extends from the facility oil transfer system's connection with the vessel to the first valve inside the secondary containment surrounding tanks in the non-transportation-related portion of the facility or, in the absence of secondary containment, to the valve or manifold adjacent to the tanks comprising the non-transportation-related portion of the facility, unless another location has otherwise been agreed to by the COTP and the appropriate federal official.

***Maximum extent practicable:***

[Non-transportation-related facility] The limitations used to determine oil spill planning resources and response times for on-water recovery, shoreline protection, and cleanup for worst-case discharges from onshore non-transportation-related facilities in adverse weather. The appropriate limitations for such planning are available technology and the practical and technical limits on an individual facility owner or operator.

[Transportation-related facility] The planned capability to respond to a worst-case discharge in adverse weather, as contained in a response plan that meets the criteria in 33 CFR or in a specific plan approved by the cognizant COTP.

[Pipeline] The limits of available technology and the practical and technical limits on a pipeline operator in planning the response resources required to provide the on-water recovery capability and the shoreline protection and cleanup capability to conduct response activities for a worst-case discharge from a pipeline in adverse weather.

***Natural Resource Damage Assessment:***

The process by which trustees determine whether a resource has been injured, the loss associated with that injury, in order to effect restoration.

***Natural resources:***

Land, fish, wildlife, biota, air, water, groundwater, drinking water supplies, and other such resources belonging to, managed by, held in trust by, appertaining to, or otherwise controlled by the United

States (including the resources of the exclusive economic zone), and state or local government or Indian tribe or foreign government.

***Navigable Waters:***

The waters of the United States, including the territorial sea and such waters which are used for recreation; waters from which fish or shellfish are taken and sold in interstate or foreign commerce.

***Nearshore Area:***

The area extending seaward 12 miles from the boundary lines defined in 46 CFR Part 7, except in the Gulf of Mexico. In the Gulf of Mexico, the area extending seaward 12 miles from the line of demarcation (COLREG lines) as defined in 33 CFR §§ 80.740 through 80.850.

***Non-Petroleum Oil:***

Oil of any kind that is not petroleum-based. This category includes, but is not limited to, animal and vegetable oils.

***Ocean:***

The offshore area and nearshore area as defined in 33 CFR.

***Offshore Area:***

The area beyond 12 nautical miles measured from the boundary lines defined in 46 CFR Part 7 seaward to 50 nautical miles, except in the Gulf of Mexico. In the Gulf of Mexico, the area beyond 12 nautical miles of the line of demarcation (COLREG lines) defined in 33 CFR §§ 80.740 through 80.850 of this chapter extending seaward to 50 nautical miles.

***Oil:***

Oil of any kind or in any form, including, but not limited to, petroleum oil, fuel oil, sludge, oil refuse, and oil mixed with wastes other than dredge spoil.

***Oil Groups:***

- ***Nonpersistent or Group I Oil*** A petroleum-based oil that, at the time of shipment, consists of hydrocarbon fractions:
  - (1) At least 50% of which by volume, distill at a temperature of 340°C (640°F); and
  - (2) At least 95% of which by volume, distill at a temperature of 370°C (700°F).
- ***Persistent oil*** A petroleum-based oil that does not meet the distillation criteria for a nonpersistent oil. For the purposes of 33 CFR Subpart F, persistent oils are further classified based on specific gravity as follows:
  - (1) Group II — specific gravity less than 0.85
  - (2) Group III — specific gravity between 0.85 and less than 0.95
  - (3) Group IV — specific gravity from 0.95 and to and including 1.00
  - (4) Group V — specific gravity greater than 1.00

***Oil Spill Removal Organization (OSRO):***

An entity that provides response resources.

***Onshore Oil Pipeline Facilities:***

New and existing pipe, right-of-ways, and any equipment, facility, or building used in the transportation of oil located in, on, or under any land within the United States other than submerged land.

***Operating Area:***

Geographic location(s), such as Rivers and Canals, Inland, Great Lakes, or Offshore, in which a facility is handling, storing, or transporting oil.

***Operating Environment:***

Rivers and canals, inland, great lakes, or ocean. These terms are used to define the conditions in which response equipment is designed to function.

***Operating in Compliance with the Plan:***

Operating in compliance with the provisions of 33 CFR Subpart F including, ensuring the availability of the response resources by contract or other approved means, and conducting the necessary training and drills.

***Operator:***

A person who owns or operates onshore oil pipeline facilities.

***Passive use values:***

The values placed on those resources that are not normally associated with a monetary amount, such as, an endangered species, migratory birds, national parks, etc.

***Pipeline:***

All parts of an onshore pipeline facility through which oil moves, including but not limited to, line pipe, valves, and other appurtenances connected to line pipe, pumping units, fabricated assemblies associated with pumping units, metering and delivery stations and fabricated assemblies therein, and breakout tanks.

***Regional Incident Commander:***

The individual who is responsible for the management of incident operations for the region. The response resources of Regional Incident Commander should be adequate to respond to the worst-case spill in the region. Under Navy policy, the RIC and the RQI are the same person.

***Regional Qualified Individual:***

The English-speaking representative of the region (the Navy On-Scene Commander), located in the United States, available on a 24-hour basis, with full authority to: activate and contract with required oil spill removal organization(s); activate personnel and equipment maintained by the operator; act as

liaison with the OSC; and obligate any funds required to carry out all required or directed oil spill activities. Under Navy policy, the RQI and the RIC are the same person.

***Repair:***

Any work necessary to maintain or restore a tank or related equipment to a condition suitable for safe operation.

***Response Activities:***

The containment and removal of all from the land, water, and shorelines, the temporary storage and disposal of recovered oil, or the taking of other actions as necessary to minimize or mitigate damage to the public health or welfare or the environment.

***Response Area:***

The inland zone or coastal zone, as defined in this plan.

***Response Plan:***

The operator's core plan and the response zone appendices for responding to the maximum extent practicable, to a worst-case discharge of oil, or the substantial threat of such a discharge.

***Response resources:***

The personnel, equipment, supplies, and other capabilities necessary to perform the response activities identified in a response plan.

***Response Zone:***

A geographic area either along a length of pipeline or including multiple pipelines, containing one or more adjacent line sections, for which the operator must plan for the deployment of, and provide, spill response capabilities. The size of the zone is determined by the operator after considering available capability, resources, and geographic characteristics.

***Rivers and Canals:***

A body of water confined within the inland area, including the Intracoastal Waterways and other waterways artificially created for navigation, that has a project depth of 12 feet or less.

***Specified Minimum Yield Strength:***

The minimum yield strength, expressed in pounds per square inch, prescribed by the specification under which the material is purchased from the manufacturer.

***Spill Management Team:***

The personnel identified to staff the organizational structure identified in a response plan to manage response plan implementation.

***Stress Level:***

The level of tangential or hoop stress, usually expressed as a percentage of specified minimum yield strength.

***Substantial Threat of a Discharge:***

Any incident or condition involving a facility that may create a risk of discharge of oil. Such incidents include, but are not limited to, storage tank or piping failures, aboveground or underground tank or pipeline leaks, fires, explosions, flooding, spills contained within the facility, or other similar occurrences.

***Unit:***

The organization element having functional responsibility for a specific incident planning, logistic, or finance activity.

**TAB 16 — ACRONYMS**

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16.0      ACRONYMS ..... FRP: TAB 16-1

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## **TAB 16 — ACRONYMS**

### **16.0 ACRONYMS**

This is a list of acronyms and abbreviations associated with oil and hazardous substance response. Many are not used in this plan, but may be of use to responders.

AC	Area Committee
ACP	Area Contingency Plan
ANSI	American National Standards Institute
API	American Petroleum Institute
ASME	American Society of Mechanical Engineers
AST	Aboveground Storage Tank
ASTM	American Society for Testing and Materials
ATSDR	Agency for Toxic Substances and Disease Registry
BOA	Basic Ordering Agreement
CAA	Clean Air Act
CCAOSCA	Corpus Christi Area Oil Spill Control Association
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CERCLIS	CERCLA Information System
CFR	Code of Federal Regulations
CHRIS	Chemical Hazards Response Information System
CNO	Chief of Naval Operations
CO	Commanding Officer
COE	Corps of Engineers (U.S. Army)
CWA	Clean Water Act
DFM	Diesel fuel, marine
DLA	Defense Logistics Agency
DOC	U.S. Department of Commerce
DOD	U.S. Department of Defense
DOE	U.S. Department of Energy
DOI	U.S. Department of the Interior
DOJ	U.S. Department of Justice
DOL	U.S. Department of Labor
DON	U.S. Department of the Navy
DOS	U.S. Department of State
DOT	U.S. Department of Transportation
DRAT	District Response Advisory Team
DRG	District Response Group (USCG)
DRMO	Defense Reutilization and Marketing Office
EFA	Engineering Field Activity (of NAVFAC)
EFD	Engineering Field Division (of NAVFAC)
EHM	Extremely hazardous material
EO	Executive Order
EPA	U.S. Environmental Protection Agency
EPCRA	Emergency Planning and Community Right-to-Know Act
ERAP	Emergency Response Action Plan (of FRP)
ERT	Environmental Response Team
ESA	Endangered Species Act
FEMA	U.S. Federal Emergency Management Agency
FFA	Federal Facility Agreement
FIC	Facility Incident Commander

FOSC	Federal On-Scene Coordinator
FQI	Facility Qualified Individual
FR	Federal Register
FRERP	Federal Radiological Emergency Response Plan
FY	Fiscal year
GSA	General Services Administration
HAZMAT	Hazardous material
HHS	U.S. Department of Health and Human Services
HM	Hazardous material
HS	Hazardous substance
HW	Hazardous waste
ICS	Incident Command System
IFO	Intermediate fuel oil
IR	Installation Restoration (program)
JAG	Judge Advocate General
LEPC	Local Emergency Planning Committee
MGO	Marine gas oil
MOA	Memorandum of Agreement
MOU	Memorandum of Understanding
MSDS	Material Safety Data Sheet
MSRC	Marine Spill Response Corporation
NACE	National Association of Corrosion Engineers
NAVFAC	Naval Facilities Engineering Command
NCP	National Oil and Hazardous Substances Pollution Contingency Plan
NFESC	Naval Facilities Engineering Service Center
NFPA	National Fire Protection Association
NIOSH	National Institute for Occupational Safety and Health
NOAA	National Oceanic and Atmospheric Administration
NRC	National Response Center (USCG)
NRS	National Response System
NRT	National Response Team
NSCC	National Scheduling Coordinating Committee
NSF	USCG National Strike Force
NSFCC	USCG National Strike Force Coordination Center (Elizabeth City, NC)
NVIC	USCG Navigation and Inspection Circular
OPA 90	Oil Pollution Act of 1990 (Public Law 101-380 of 18 Aug 90)
OPNAVINST	No Instruction
OSC	On-Scene Coordinator
OSRO	Oil Spill Removal Organization (classified by NSFCC)
OSHA	Occupational Safety and Health Administration
PA	Pollution Abatement (funds)
PLA	Plain Language Address (Navy jargon)
POC	Point of contact
POL	Petroleum-oil-lubricant
PPE	Personal protective equipment
PREP	Preparedness-for-Response Exercise Program (USCG)
RA	Regional Administrator (EPA)
RCP	Regional Contingency Plan
RCRA	Resource Conservation and Recovery Act
RIC	Regional Incident Commander
RPM	Remedial Project Manager
RQ	Reportable quantity (of hazardous substances)

RQI	Regional Qualified Individual
RRC	Regional Response Center
RRT	Regional Response Team
SARA	Superfund Amendments and Reauthorizaton Act of 1986
SDWA	Safe Drinking Water Act of 1986
SECDEF	Secretary of Defense
SECNAV	Secretary of the Navy
SERC	State Emergency Response Commission
SI	Surface impoundment
SIC	Standard Industrial Classification (codes)
SONS	Spill of National Significance
SPCC	Spill Prevention, Control and Countermeasures (plan)
SSC	Scientific Support Coordinator (NOAA)
SUPSALV	Supervisor of Salvage (Navy)
SWDA	Solid Waste Disposal Act
TSCA	Toxic Substance Control Act
UIC	Uniform Identification Code
UL	Underwriters Laboratory
USCG	U.S. Coast Guard
USDA	U.S. Department of Agriculture
USFWS	U.S. Fish and Wildlife Service
USNPS	U.S. National Park Service
UST	Underground storage tank
VOSS	Vessel of Opportunity Skimmer System

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**TAB 17 — REFERENCES**

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17.0 REFERENCES ..... FRP: TAB 17-1

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## TAB 17 — REFERENCES

### 17.0 REFERENCES

This is an annotated list of references of particular interest to OPA 90 facilities. A table of key American Petroleum Institute standards is also provided.

*33 CFR 154. Response Plans.* U.S. Department of Transportation (Coast Guard). Federal Register of 5 February 1993. The Coast Guard regulation on facility response plans for marine transportation-related facilities.

*40 CFR 112. Oil Pollution Prevention.* U.S. Environmental Protection Agency. Federal Register of 17 February 1993. The EPA proposed regulation on facility response plans for non-transportation-related facilities.

*49 CFR 171. Oil Spill Prevention and Response Plans.* U.S. Department of Transportation (Research and Special Programs Administration). Federal Register of 2 February 1993. The RSPA regulation on facility response plans for bulk packagings (tank cars and tank trucks).

*49 CFR 194. Response Plans for Onshore Oil Pipelines.* U.S. Department of Transportation (Research and Special Programs Administration). Federal Register of 5 January 1993. The RSPA regulation on facility response plans for pipelines off a facility's property.

*Chemical Hazard Response Information System (CHRIS), Volume I: Condensed Guide to Chemical Hazards.* Commandant Instruction M16465.11b. U.S. Coast Guard. 2 November 1992. A single-volume quick reference of MSDS-type information on numerous chemicals, including some fuels and oils. Has CHRIS codes, 3-letter codes for each chemical. Available by credit card via phone from Superintendent of Documents, (202) 783-3238; stock #050-012-00328-9; \$39 in 1993.

*Chemical Hazard Response Information System (CHRIS), Volume II: Hazardous Chemical Data.* Commandant Instruction M16465.12b. U.S. Coast Guard. 2 November 1992. A massive, unbound, detailed reference of MSDS-type information on numerous chemicals, including some fuels and oils. Has CHRIS codes, 3-letter codes for each chemical. Available by credit card over the phone from Superintendent of Documents, (202) 783-3238; stock #050-012-00329-7; \$50 in 1993.

*Guide for Development of State and Local Emergency Operations Plans.* Federal Emergency Management Agency. September 1990. Available from FEMA Publications Office: (202) 646-3484.

*Guide for the Review of State and Local Emergency Operations Plans.* Federal Emergency Management Agency. September 1988. Available from FEMA Publications Office: (202) 646-3484.

*Hazardous Materials Contingency Planning Course (Student Manual).* Federal Emergency Management Agency. June 1990. Available from FEMA Publications Office: (202) 646-3484.

*Interagency Agreement (IAA) Between the United States Navy and the United States Coast Guard for Cooperation in Oil Spill Clean-up Operations and Salvage Operations.* Signed in 1980. A mutual-aid agreement concerning oil spill cleanup and salvage operations.

*Memorandum of Understanding Between the Secretary of Transportation and the Administrator of the Environmental Protection Agency.* Signed 24 November 1971. Published at 36 FR 24080. This agreement established what kinds of facilities were transportation-related (DOT regulated) and what kinds were non-transportation-related (EPA regulated). For OPA 90 purposes, its main significance is that it set the jurisdictional boundaries between a marine transportation-related facility (USCG regulated) and an associated oil storage facility (EPA regulated). The boundary is the valve farthest from the tank(s) but still inside secondary containment if such containment exists, and the valve or manifold nearest the tank(s) otherwise.

*Naval Oil Spills Annual Report.* Naval Facilities Engineering Service Center, Code 413. An annual report on Navy oil spills occurring in the previous fiscal year. Data are presented by type of installation and spill cause.

*Navigation and Vessel Inspection Circular No. 12-92.* U.S. Coast Guard. Documentation of the USCG classification program for Oil Spill Removal Organizations (OSROs), i.e., response contractors.

*OPNAVINST 5090.1A. Environmental and Natural Resources Program Manual.* Department of the Navy. 2 October 1990. The Navy's guidance document on environmental matters, including oil and hazardous substance spills.

*Pollution Response Guide and Equipment Manual.* U.S. Navy Supervisor of Salvage. NAVSEA-S0300-BR-MAN-010. September 1993. Reference to SUPSALV capabilities and spill response equipment. Available from NAVSEA, (703) 607-2758 (Paul Hankins in 1993).

*Preparedness-for-response Exercise Program (Prep) Guidelines.* Draft. U.S. Coast Guard. 1 October 1993. Guidelines for the PREP program which will be written into the final OPA 90 regulations. Any facility intending to follow PREP in lieu of individual regulation exercise requirements must use this document to understand commitments resulting from its use. Available by request from the Coast Guard: (202) 267-2616 in 1993.

Key Industrial Standards				
Issuer	Type	No.	Title	Comments
API	Std	620	Design and Construction of Large, Welded, Low-Pressure Storage Tanks	
API	Std	650	Welded Steel Tanks for Oil Storage	
API	RP	651	Cathodic Protection of Aboveground Petroleum Storage Tanks	
API	RP	652	Lining of Aboveground Petroleum Storage Tank Bottoms	
API	Std	653	Tank Inspection, Repair, Alteration, and Reconstruction	
API	Std	2000	Venting Atmospheric and Low-Pressure Storage Tanks (Nonrefrigerated and refrigerated)	
<b>Issuers:</b> <b>API American Petroleum Institute</b> <b>(Publications Dept: (202) 682-8376)</b>			<b>Type Standards:</b> <b>Std Standard</b> <b>RP Recommended Practice</b>	

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**TAB 18 — MAPS****18.0 MAPS**

The following NAS Corpus Christi diagrams are contained in this section:

<b>NAS Corpus Christi Diagrams</b>		
<b>Number</b>	<b>Title</b>	<b>Drawing/Figure Name</b>
1.	NAS Corpus Christi: Base Map NAS Corpus Christi	050BMAP2
2.	NAS Corpus Christi: AST & UST Storage Locations	91AUSL01
3.	NAS Corpus Christi: Transformer Inventory by Utility Grid Location	91TIUGL1
4.	NAS Corpus Christi: Evacuation and Equipment Haul Route	50HAULRT
5.	NAS Corpus Christi: Generalized Potential Spill Flow Routes for ASTs and Select USTs	91GPSFR1
6.	NAS Corpus Christi: Drainage System: Potential Storm and Sanitary Sewer System Flow Direction	91DSSS01
7.	NAS Corpus Christi: Texas Water Commision Map: Nueces County Texas 178, Three sections	NUECES County Texas 178
8.	NAS Corpus Christi: Nueces County Texas Key to Sensitive areas	NUECES County Texas 178, Sensitive area key

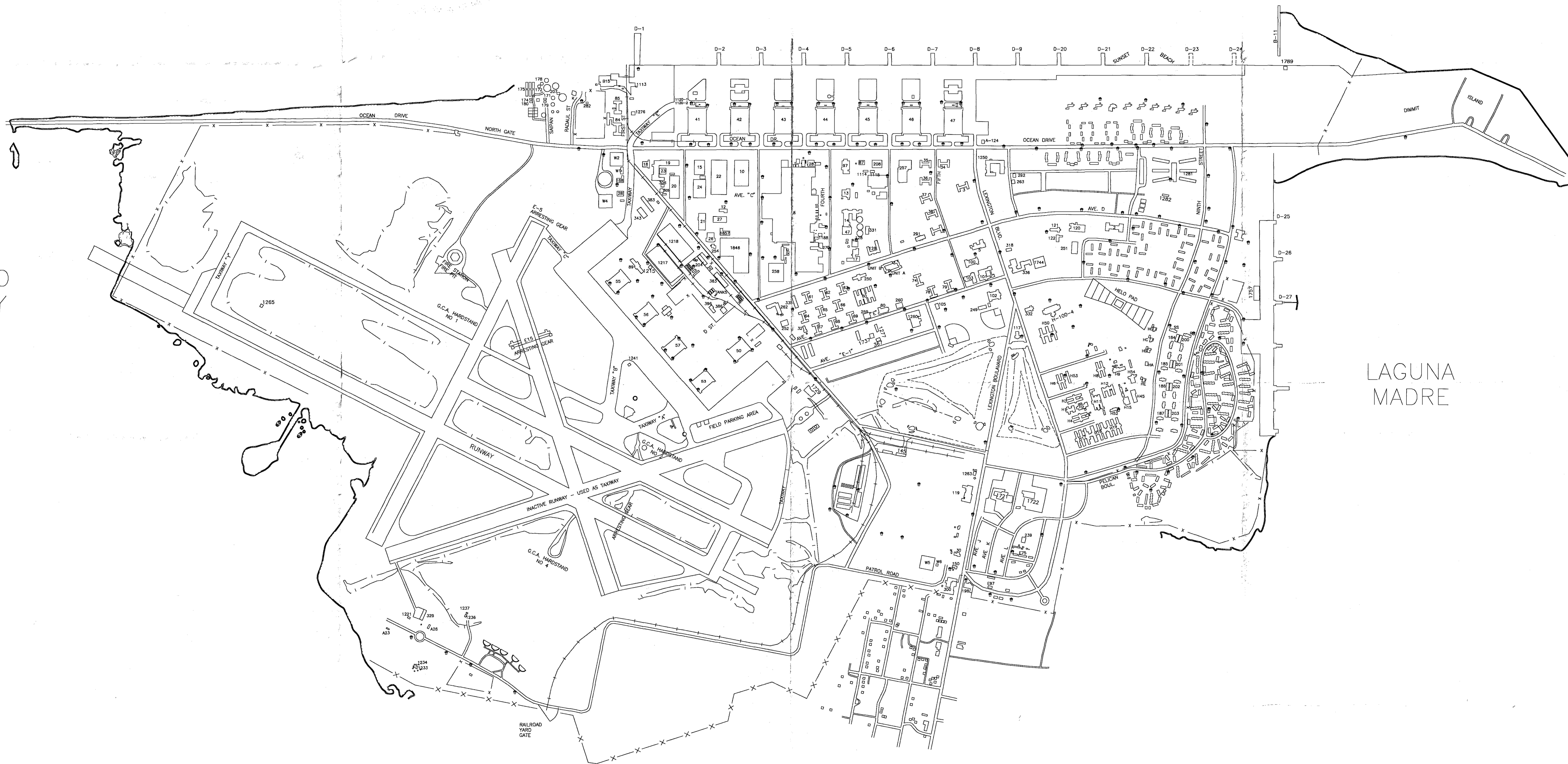
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# CORPUS CHRISTI BAY

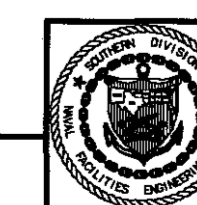
OSO BAY

LAGUNA MADRE



- LEGEND
- FENCE
  - RAILROAD
  - WATER FRONT
  - WETLANDS
  - FIRE HYDRANT

900 0 900  
SCALE FEET



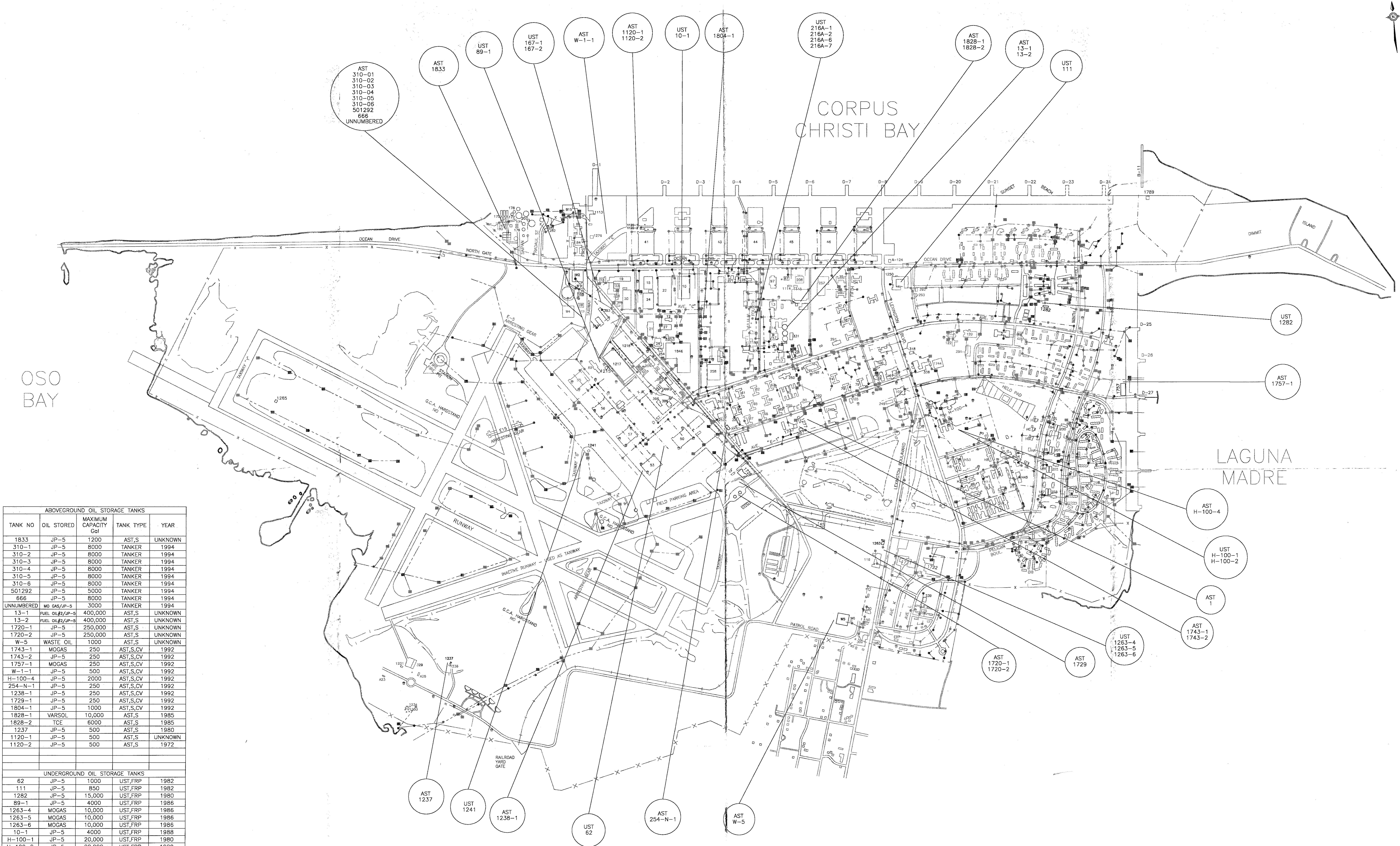
NAS CORPUS CHRISTI  
OHS CONTINGENCY PLAN


BASE MAP  
NAS CORPUS CHRISTI

Dr. by: CHRIS TRIPLETT	Tr. by:	Sheet 1
Chk. by: ELTON GRIGGS	App. by: R. BARLOW	Of 1
Date: 01/12/94	DWG Name: 0508MAP2	

008TB04X

ABOVEGROUND OIL STORAGE TANKS				
TANK NO	OIL STORED	MAXIMUM CAPACITY Gg	TANK TYPE	YEAR
1833	JP-5	1200	AST,S	UNKNOWN
310-1	JP-5	8000	TANKER	1994
310-2	JP-5	8000	TANKER	1994
310-3	JP-5	8000	TANKER	1994
310-4	JP-5	8000	TANKER	1994
310-5	JP-5	8000	TANKER	1994
310-6	JP-5	8000	TANKER	1994
501292	JP-5	5000	TANKER	1994
666	JP-5	8000	TANKER	1994
UNNUMBERED	MO GAS/JP-5	3000	TANKER	1994
13-1	FUEL OIL#2/JP-5	400,000	AST,S	UNKNOWN
13-2	FUEL OIL#2/JP-5	400,000	AST,S	UNKNOWN
1720-1	JP-5	250,000	AST,S	UNKNOWN
1720-2	JP-5	250,000	AST,S	UNKNOWN
W-5	WASTE OIL	1000	AST,S	UNKNOWN
1743-1	MOGAS	250	AST,S,CV	1992
1743-2	JP-5	250	AST,S,CV	1992
1757-1	MOGAS	250	AST,S,CV	1992
W-1-1	JP-5	500	AST,S,CV	1992
H-100-4	JP-5	2000	AST,S,CV	1992
254-N-1	JP-5	250	AST,S,CV	1992
1238-1	JP-5	250	AST,S,CV	1992
1729-1	JP-5	250	AST,S,CV	1992
1804-1	JP-5	1000	AST,S,CV	1992
1828-1	VARISOL	10,000	AST,S	1985
1828-2	TOE	6000	AST,S	1985
1237	JP-5	500	AST,S	1980
1120-1	JP-5	500	AST,S	UNKNOWN
1120-2	JP-5	500	AST,S	1972
UNDERGROUND OIL STORAGE TANKS				
62	JP-5	1000	UST,FRP	1982
111	JP-5	850	UST,FRP	1982
1282	JP-5	15,000	UST,FRP	1980
89-1	JP-5	4,000	UST,FRP	1986
1263-4	MOGAS	10,000	UST,FRP	1986
1263-5	MOGAS	10,000	UST,FRP	1986
1263-6	MOGAS	10,000	UST,FRP	1986
10-1	JP-5	4000	UST,FRP	1988
H-100-1	JP-5	20,000	UST,FRP	1980
H-100-2	JP-5	20,000	UST,FRP	1980
216A-1	VARISOL	13,000	UST,S	1943
216A-2	JP-4	13,000	UST,S	1943
216A-6	JP-4	3000	UST,S	1963
216A-7	JP-4	3000	UST,S	1963
1241	JP-5	500	UST,S	1965
167-1	MOGAS	10,000	UST,V	1993
167-2	JP-5	10,000	UST,V	1993
KEY TO TANK TYPE COLUMN				
DBWL=DOUBLE WALL				
FRP=FIBERGLASS REINFORCED PLASTIC				
V=VAULTED				
S=STEEL				





NAS CORPUS CHRISTI  
OHS CONTINGENCY PLAN

AST & UST STORAGE LOCATIONS  
NAS CORPUS CHRISTI

Dr by: CCC

Tr by:

Ck by: ELTON GRIGGS

App by: R. BARLOW

Date: 08/14/96

DWG Name: 91AUSL01

Sheet 1  
Of 1

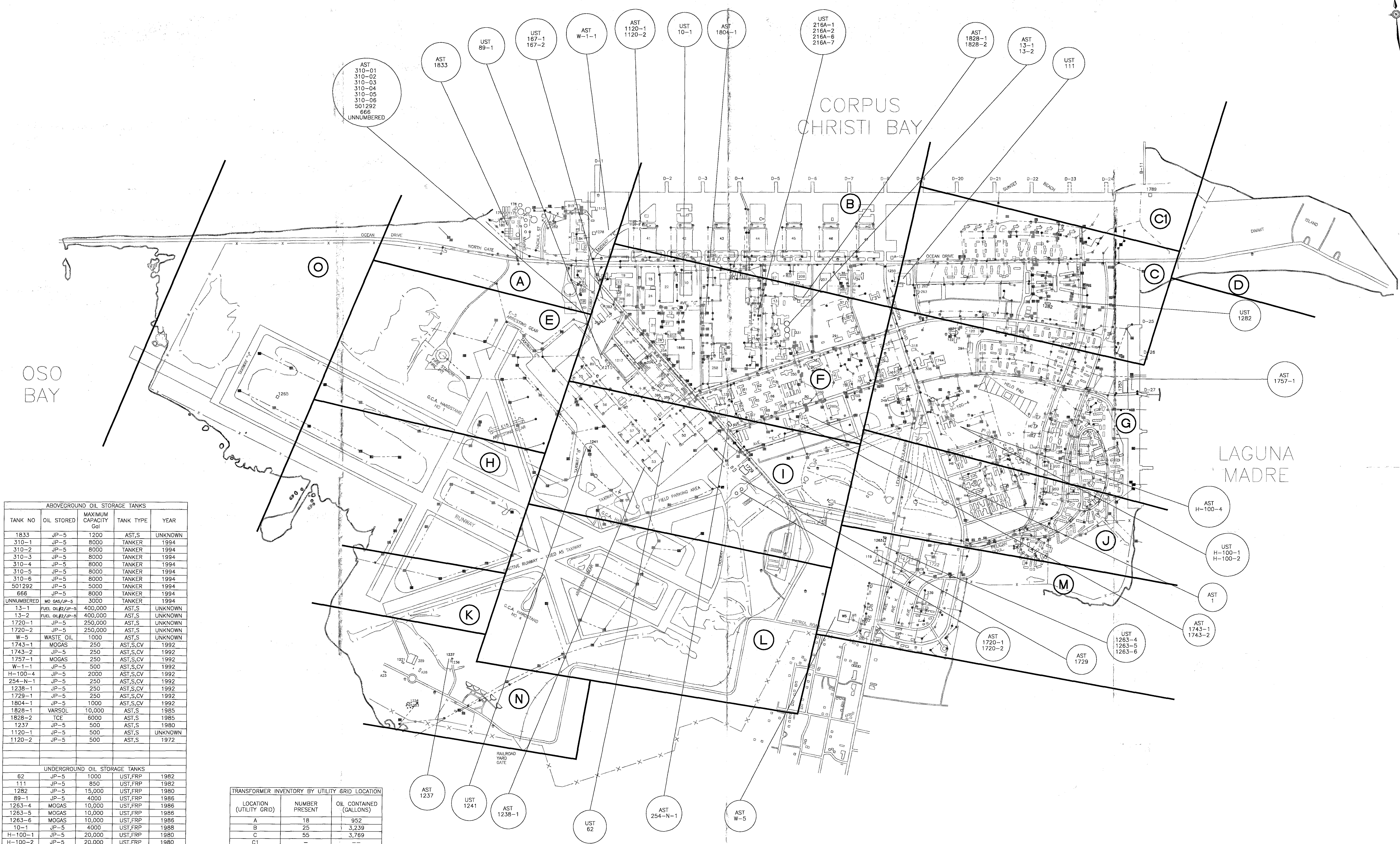
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310-4	JP-5	8000	TANKER	1994	
310-5	JP-5	8000	TANKER	1994	
310-6	JP-5	8000	TANKER	1994	
501292	JP-5	5000	TANKER	1994	
666	JP-5	8000	TANKER	1994	
UNNUMBERED	MO GAS/JP-5	3000	TANKER	1994	
13-1	FUEL OIL #2/JP-5	400,000	AST,S	UNKNOWN	
13-2	FUEL OIL #2/JP-5	400,000	AST,S	UNKNOWN	
1720-1	JP-5	250,000	AST,S	UNKNOWN	
1720-2	JP-5	250,000	AST,S	UNKNOWN	
W-5	WASTE OIL	1000	AST,S	UNKNOWN	
1743-1	MOGAS	250	AST,S,CV	1992	
1743-2	JP-5	250	AST,S,CV	1992	
1757-1	MOGAS	250	AST,S,CV	1992	
W-1	JP-5	500	AST,S,CV	1992	
H-100-4	JP-5	2000	AST,S,CV	1992	
254-N-1	JP-5	250	AST,S,CV	1992	
1238-1	JP-5	250	AST,S,CV	1992	
1729-1	JP-5	250	AST,S,CV	1992	
1804-1	JP-5	1000	AST,S,CV	1992	
1828-1	VARISOL	10,000	AST,S	1985	
1828-2	TCE	6000	AST,S	1985	
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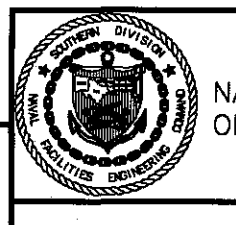
UNDERGROUND OIL STORAGE TANKS					
TANK NO	OIL STORED	MAXIMUM CAPACITY Gal	TANK TYPE	YEAR	
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111	JP-5	850	UST,FRP	1982	
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89-1	JP-5	4000	UST,FRP	1986	
1263-4	MOGAS	10,000	UST,FRP	1986	
1263-5	MOGAS	10,000	UST,FRP	1986	
1263-6	MOGAS	10,000	UST,FRP	1986	
10-1	JP-5	4000	UST,FRP	1988	
H-100-1	JP-5	20,000	UST,FRP	1980	
H-100-2	JP-5	20,000	UST,FRP	1980	
216A-1	VARISOL	13,000	UST,S	1943	
216A-2	JP-4	13,000	UST,S	1943	
216A-6	JP-4	3000	UST,S	1963	
216A-7	JP-4	3000	UST,S	1963	
1241	JP-5	500	UST,S	1965	
167-1	MOGAS	10,000	UST,V	1993	
167-2	JP-5	10,000	UST,V	1993	

KEY TO TANK TYPE COLUMN  
DBWL-DOUBLE WALL  
FRP-FIBERGLASS REINFORCED PLASTIC  
V-VAULTED  
S-STEEL

TRANSFORMER INVENTORY BY UTILITY GRID LOCATION		
LOCATION (UTILITY GRID)	NUMBER PRESENT	OIL CONTAINED (GALLONS)
A	18	952
B	25	3,239
C	55	3,769
C1	-	-
D	3	175
E	-	-
F	64	5,675
G	90	5,628
H	8	50
I	39	2,859
J	31	675
K	-	-
L	3	62
M	10	907
N	-	-
O	7	44
TOTALS	353	24,035

NOTE: SOURCE OF DATA: INVENTORY CARDS AS OF 3/96



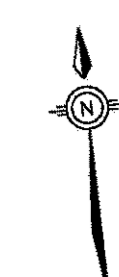


NAS CORPUS CHRISTI  
OHS CONTINGENCY PLAN

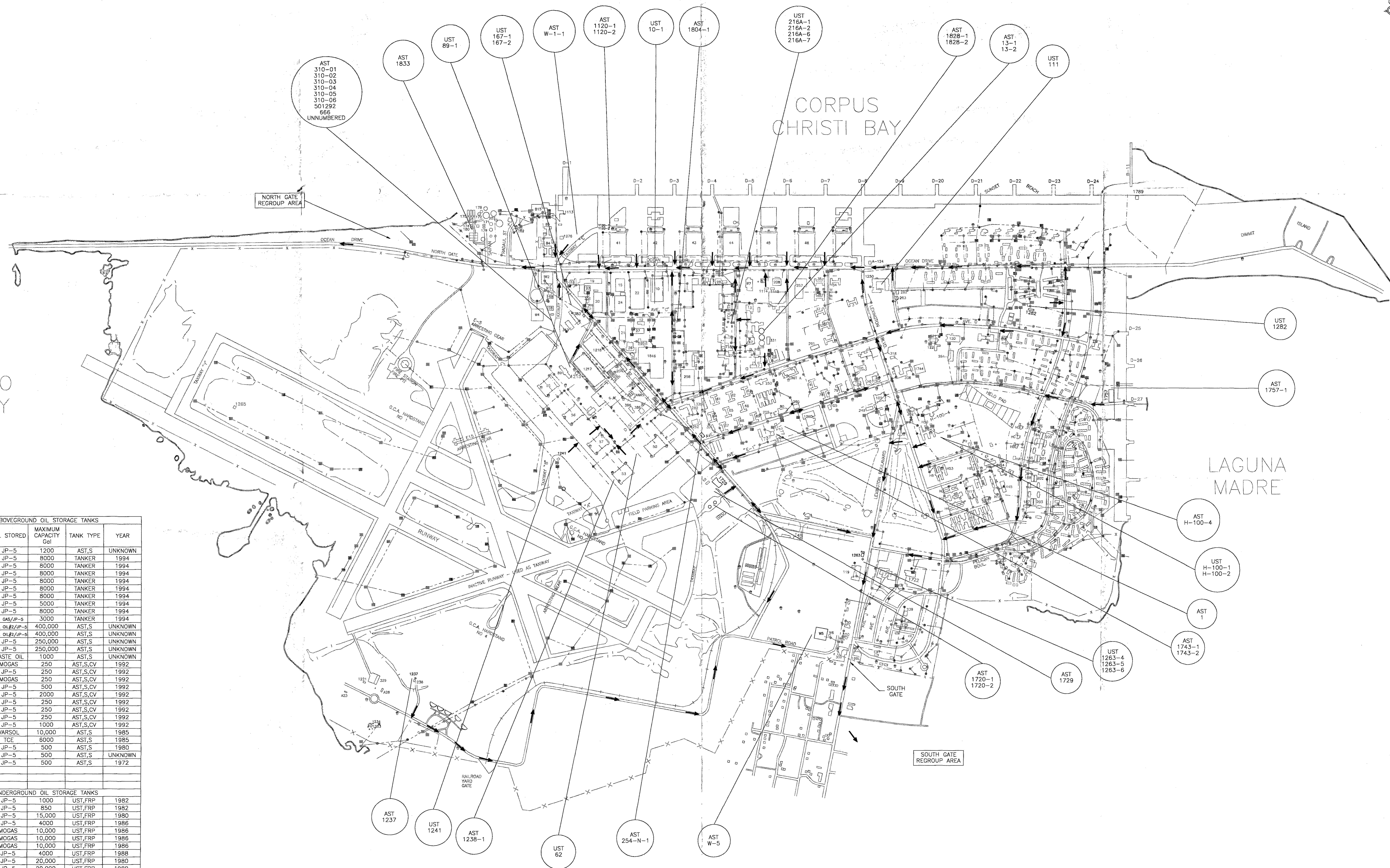
TRANSFORMER INVENTORY BY UTILITY GRID LOCATION  
NAS CORPUS CHRISTI

Dr by: CCC	Tr by:
Ch by: ELTON GRIGGS	App by: R. BARLOW
Date: 08/14/96	DWG Name: 91TUIGL1

Sheet 1	Of 1
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ABOVEGROUND OIL STORAGE TANKS				
TANK NO	OIL STORED	MAXIMUM CAPACITY Gal	TANK TYPE	YEAR
1833	JP-5	1200	AST, S	UNKNOWN
310-1	JP-5	8000	TANKER	1994
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310-5	JP-5	8000	TANKER	1994
310-6	JP-5	8000	TANKER	1994
501292	JP-5	5000	TANKER	1994
666	JP-5	8000	TANKER	1994
UNNUMBERED	MO GAS/JP-5	3000	TANKER	1994
13-1	FUEL OIL #2/JP-5	400,000	AST, S	UNKNOWN
13-2	FUEL OIL #2/JP-5	400,000	AST, S	UNKNOWN
1720-1	JP-5	250,000	AST, S	UNKNOWN
1720-2	JP-5	250,000	AST, S	UNKNOWN
W-5	WASTE OIL	1000	AST, S	UNKNOWN
1743-1	MOGAS	250	AST, S, CV	1992
1743-2	JP-5	250	AST, S, CV	1992
1757-1	MOGAS	250	AST, S, CV	1992
W-1-1	JP-5	500	AST, S, CV	1992
H-100-4	JP-5	2000	AST, S, CV	1992
254-N-1	JP-5	250	AST, S, CV	1992
1238-1	JP-5	250	AST, S, CV	1992
1729-1	JP-5	250	AST, S, CV	1992
1804-1	JP-5	1000	AST, S, CV	1992
1828-1	VARISOL	10,000	AST, S	1985
1828-2	TCE	6000	AST, S	1985
1237	JP-5	500	AST, S	1980
1120-1	JP-5	500	AST, S	UNKNOWN
1120-2	JP-5	500	AST, S	1972
UNDERGROUND OIL STORAGE TANKS				
62	JP-5	1000	UST, FRP	1982
111	JP-5	850	UST, FRP	1982
1282	JP-5	15,000	UST, FRP	1980
89-1	JP-5	4000	UST, FRP	1986
1263-4	MOGAS	10,000	UST, FRP	1986
1263-5	MOGAS	10,000	UST, FRP	1986
1263-6	MOGAS	10,000	UST, FRP	1986
10-1	JP-5	4000	UST, FRP	1988
H-100-1	JP-5	20,000	UST, FRP	1980
H-100-2	JP-5	20,000	UST, FRP	1980
216A-1	VARISOL	13,000	UST, S	1943
216A-2	JP-4	13,000	UST, S	1943
216A-6	JP-4	3000	UST, S	1963
216A-7	JP-4	3000	UST, S	1963
1241	JP-5	500	UST, S	1965
167-1	MOGAS	10,000	UST, V	1993
167-2	JP-5	10,000	UST, V	1993
KEY TO TANK TYPE COLUMN				
DBWL=DOUBLE WALL				
FRP=FIBERGLASS REINFORCED PLASTIC				
V=VAULTED				
S=STEEL				

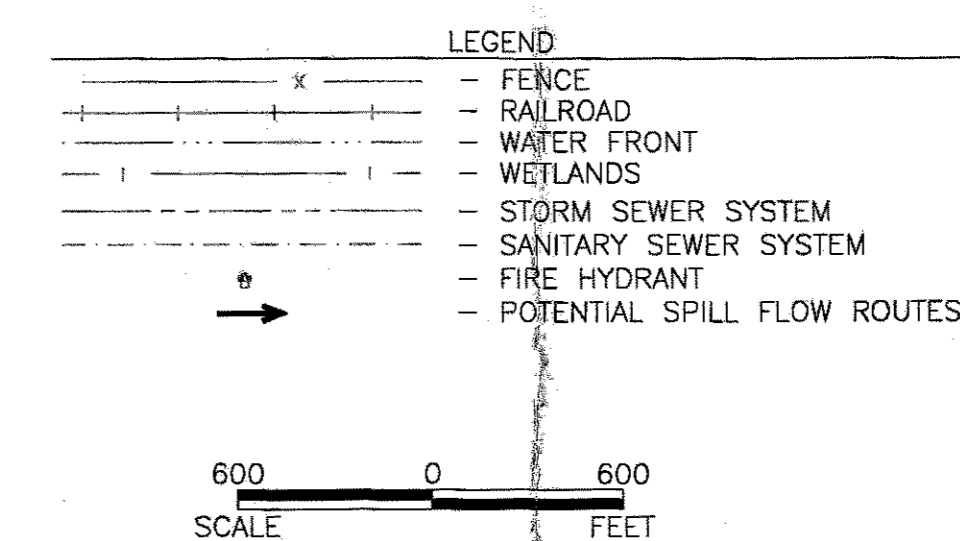


ABOVEGROUND OIL STORAGE TANKS				
TANK NO	OIL STORED	MAXIMUM CAPACITY Gal	TANK TYPE	YEAR
1833	JP-5	1200	AST,S	UNKNOWN
310-1	JP-5	8000	TANKER	1994
310-2	JP-5	8000	TANKER	1994
310-3	JP-5	8000	TANKER	1994
310-4	JP-5	8000	TANKER	1994
310-5	JP-5	8000	TANKER	1994
310-6	JP-5	8000	TANKER	1994
501292	JP-5	5000	TANKER	1994
666	JP-5	8000	TANKER	1994
UNNUMBERED	MO GAS/JP-5	3000	TANKER	1994
13-1	FUEL OIL #2/JP-5	400,000	AST,S	UNKNOWN
13-2	FUEL OIL #2/JP-5	400,000	AST,S	UNKNOWN
1720-1	JP-5	250,000	AST,S	UNKNOWN
1720-2	JP-5	250,000	AST,S	UNKNOWN
W-5	WASTE OIL	1000	AST,S	UNKNOWN
1743-1	MOGAS	250	AST,S,CV	1992
1743-2	JP-5	250	AST,S,CV	1992
1757-1	MOGAS	250	AST,S,CV	1992
W-1-1	JP-5	500	AST,S,CV	1992
H-100-4	JP-5	2000	AST,S,CV	1992
254-N-1	JP-5	250	AST,S,CV	1992
1238-1	JP-5	250	AST,S,CV	1992
1729-1	JP-5	250	AST,S,CV	1992
1804-1	JP-5	1000	AST,S,CV	1992
1828-1	VARVOL	10,000	AST,S	1985
1828-2	TCE	6000	AST,S	1985
1237	JP-5	500	AST,S	1980
1120-1	JP-5	500	AST,S	UNKNOWN
1120-2	JP-5	500	AST,S	1972
UNDERGROUND OIL STORAGE TANKS				
TANK NO	OIL STORED	MAXIMUM CAPACITY Gal	TANK TYPE	YEAR
62	JP-5	1000	UST,FRP	1982
111	JP-5	850	UST,FRP	1982
1282	JP-5	15,000	UST,FRP	1980
89-1	JP-5	4000	UST,FRP	1986
1263-4	MOGAS	10,000	UST,FRP	1986
1263-5	MOGAS	10,000	UST,FRP	1986
1263-6	MOGAS	10,000	UST,FRP	1986
10-1	JP-5	4000	UST,FRP	1988
H-100-1	JP-5	20,000	UST,FRP	1980
H-100-2	JP-5	20,000	UST,FRP	1980
216A-1	VARVOL	13,000	UST,S	1943
216A-2	JP-4	13,000	UST,S	1943
216A-6	JP-4	3000	UST,S	1963
216A-7	JP-4	3000	UST,S	1963
1241	JP-5	500	UST,S	1965
167-1	MOGAS	10,000	UST,V	1993
167-2	JP-5	10,000	UST,V	1993

KEY TO TANK TYPE COLUMN  
 DBWL=DOUBLE WALL  
 FRP=FIBERGLASS REINFORCED PLASTIC  
 V=VAULTED  
 S=STEEL

**A) NOTES:**  
 POTENTIAL DRAINAGE DISTANCE LIMITED IN DRY SEASON DUE TO FLATNESS OF GENERAL AREA.  
 DURING RAINY PERIODS, POTENTIAL FLOW DISTANCE INCREASES WITH SURFACE RUNOFF. NEAREST STORM WATER CULVERTS, DRAINAGE DITCHES AND OUTFALLS SHOULD BE BOOMED TO REDUCE SPILL IMPACT.

**B) NOTES:**  
 1) SURFACE DITCHES ARE GRASS LINED  
 2) SUBSURFACE DRAINAGE SYSTEM CONSISTS OF CONCRETE PIPING.  
 3) OVERALL DRAINAGE SYSTEM HAS NO WEIRS, BOOMS, SHUT-OFF VALVES, SUMP PUMPS, SEPARATORS, OR OTHER CLEANUP MATERIALS.



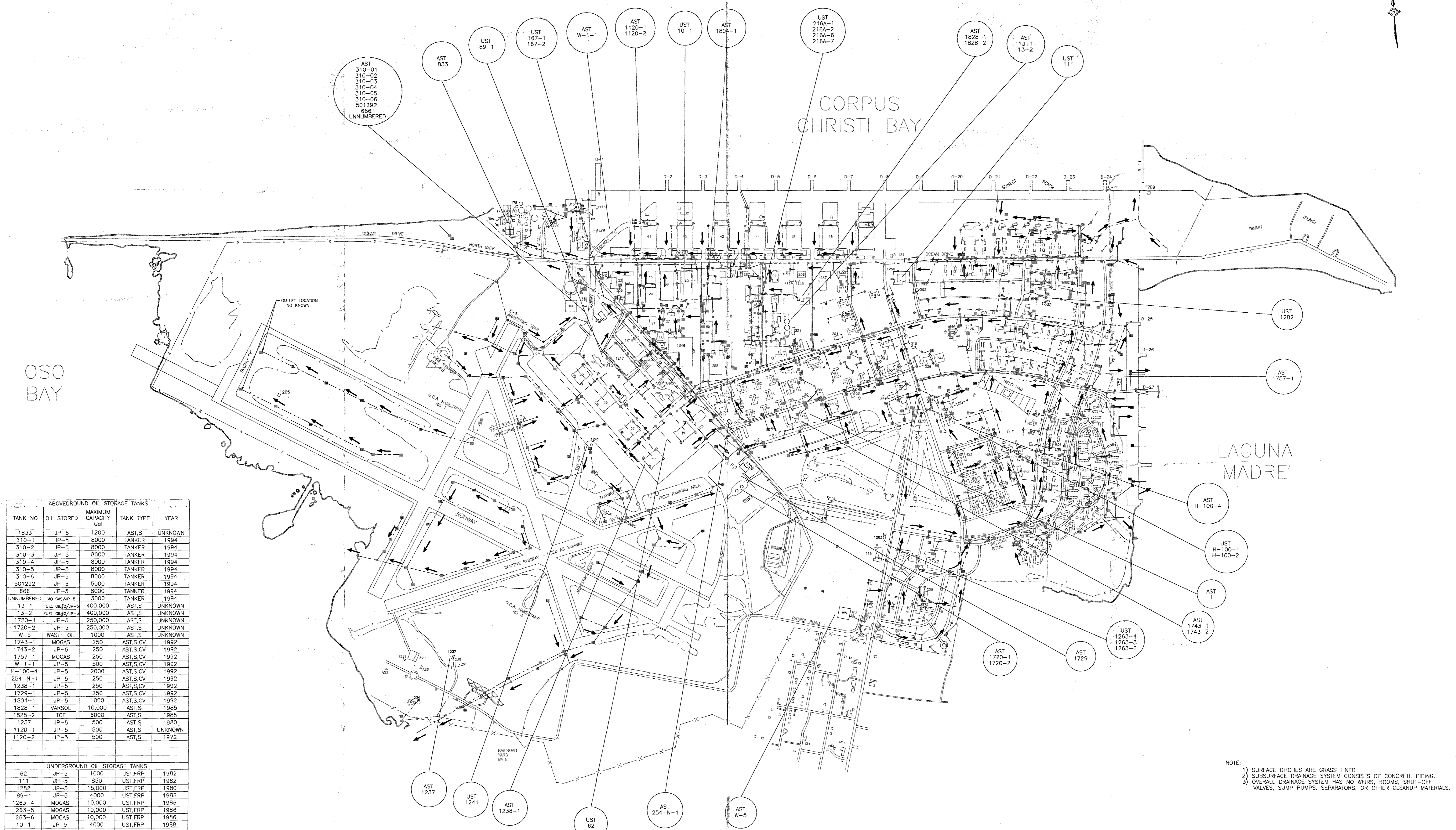
NAS CORPUS CHRISTI  
 OHS CONTINGENCY PLAN

GENERALIZED POTENTIAL SPILL FLOW ROUTES  
 FOR ASTs AND SELECT USTs  
 NAS CORPUS CHRISTI

Dr by: CCC Tr by:  
 Ck by: ELTON GRIGGS App by: R. BARLOW  
 Date: 08/14/96 DWG Name: 91GPSR1 Sheet 1 Of 1

ABOVEGROUND OIL STORAGE TANKS				
TANK NO	OIL STORED	MAXIMUM CAPACITY Gal	TANK TYPE	YEAR
1833	JP-5	1200	AST,S	UNKNOWN
310-1	JP-5	8000	TANKER	1994
310-2	JP-5	8000	TANKER	1994
310-3	JP-5	8000	TANKER	1994
310-4	JP-5	8000	TANKER	1994
310-5	JP-5	8000	TANKER	1994
310-6	JP-5	8000	TANKER	1994
501292	JP-5	5000	TANKER	1994
666	JP-5	8000	TANKER	1994
UNNUMBERED	MO GAS/JP-5	3000	TANKER	1994
13-1	FUEL OIL#2/JP-5	400,000	AST,S	UNKNOWN
13-2	FUEL OIL#2/JP-5	400,000	AST,S	UNKNOWN
1720-1	JP-5	250,000	AST,S	UNKNOWN
1720-2	JP-5	250,000	AST,S	UNKNOWN
W-5	WASTE OIL	1000	AST,S	UNKNOWN
1743-1	MOGAS	250	AST,S,CV	1992
1743-2	JP-5	250	AST,S,CV	1992
1757-1	MOGAS	250	AST,S,CV	1992
W-1-1	JP-5	500	AST,S,CV	1992
H-100-4	JP-5	2000	AST,S,CV	1992
254-N-1	JP-5	250	AST,S,CV	1992
1238-1	JP-5	250	AST,S,CV	1992
1729-1	JP-5	250	AST,S,CV	1992
1804-1	JP-5	1000	AST,S,CV	1992
1828-1	VARISOL	10,000	AST,S	1985
1828-2	TCE	6000	AST,S	1985
1237	JP-5	500	AST,S	1980
1120-1	JP-5	500	AST,S	UNKNOWN
1120-2	JP-5	500	AST,S	1972
UNDERGROUND OIL STORAGE TANKS				
62	JP-5	1000	UST,FRP	1982
111	JP-5	850	UST,FRP	1982
1282	JP-5	15,000	UST,FRP	1980
89-1	JP-5	4000	UST,FRP	1986
1263-4	MOGAS	10,000	UST,FRP	1986
1263-5	MOGAS	10,000	UST,FRP	1986
1263-6	MOGAS	10,000	UST,FRP	1986
10-1	JP-5	4000	UST,FRP	1988
H-100-1	JP-5	20,000	UST,FRP	1980
H-100-2	JP-5	20,000	UST,FRP	1980
216A-1	VARISOL	13,000	UST,S	1943
216A-2	JP-4	13,000	UST,S	1943
216A-6	JP-4	3000	UST,S	1963
216A-7	JP-4	3000	UST,S	1963
1241	JP-5	500	UST,S	1985
167-1	MOGAS	10,000	UST,V	1993
167-2	JP-5	10,000	UST,V	1993

KEY TO TANK TYPE COLUMN  
 DBWL=DOUBLE WALL  
 FRP=FIBERGLASS REINFORCED PLASTIC  
 V=VAULTED  
 S=STEEL



NOTE:  
 1) SURFACE DITCHES ARE GRASS LINED  
 2) SUBSURFACE DRAINAGE SYSTEM CONSISTS OF CONCRETE PIPING.  
 3) OVERALL DRAINAGE SYSTEM HAS NO WEIRS, BOOMS, SHUT-OFF VALVES, SUMP PUMPS, SEPARATORS, OR OTHER CLEANUP MATERIALS.

LEGEND	
—x—	FENCE
—+—	RAILROAD
—wavy—	WATER FRONT
—dotted—	WETLANDS
—dashed—	STORM SEWER SYSTEM
—solid—	SANITARY SEWER SYSTEM
—dot-dot-dot—	FIRE HYDRANT
—arrow—	POTENTIAL DRAINAGE FLOW

800 0 800  
 SCALE FEET

NAS CORPUS CHRISTI  
 DHS CONTINGENCY PLAN

DRAINAGE SYSTEM: POTENTIAL STORM AND  
 SANITARY SEWER SYSTEM FLOW DIRECTION  
 NAS CORPUS CHRISTI

Dr by: CDC	Tr by:
Ch by: ELTON GRIGGS	App by: R. BARLOW
Date: 08/15/96	DWG Name: 910SSS01

Sheet 1  
 of 1

# NUECES COUNTY TEXAS

SCALE IN MILES

1969

1980 CENSUS FIGURES

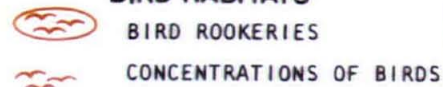
HIGHWAYS REVISED TO FEBRUARY 1, 1982

Copies of this map are available for public use at nominal cost from the State Department of Highways and Public Transportation, P.O. Box 5051, Austin, Texas 78763

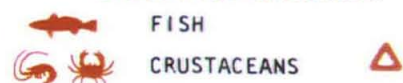
## RARE, THREATENED, AND ENDANGERED SPECIES HABITATS



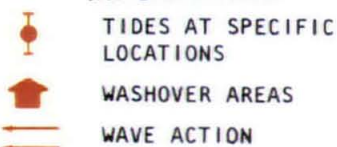
## BIRD HABITATS



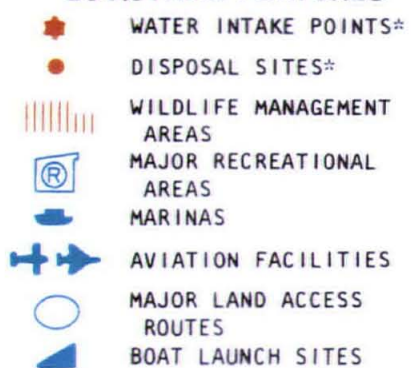
## PRIME FISH AND SHELLFISH GROUNDS



## COASTAL HYDROGRAPHIC INFORMATION



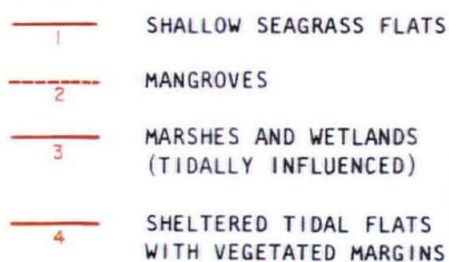
## LOGISTICAL FEATURES



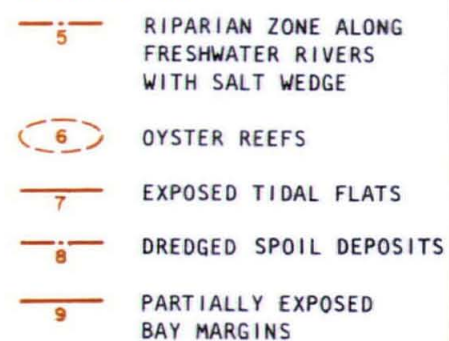
\*M = Municipal I = Industrial

## COASTAL SENSITIVITY INDEX

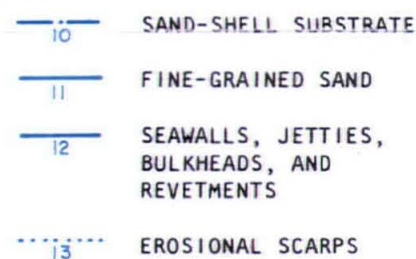
### HIGH IMPACT



### MODERATE IMPACT



### LOW IMPACT

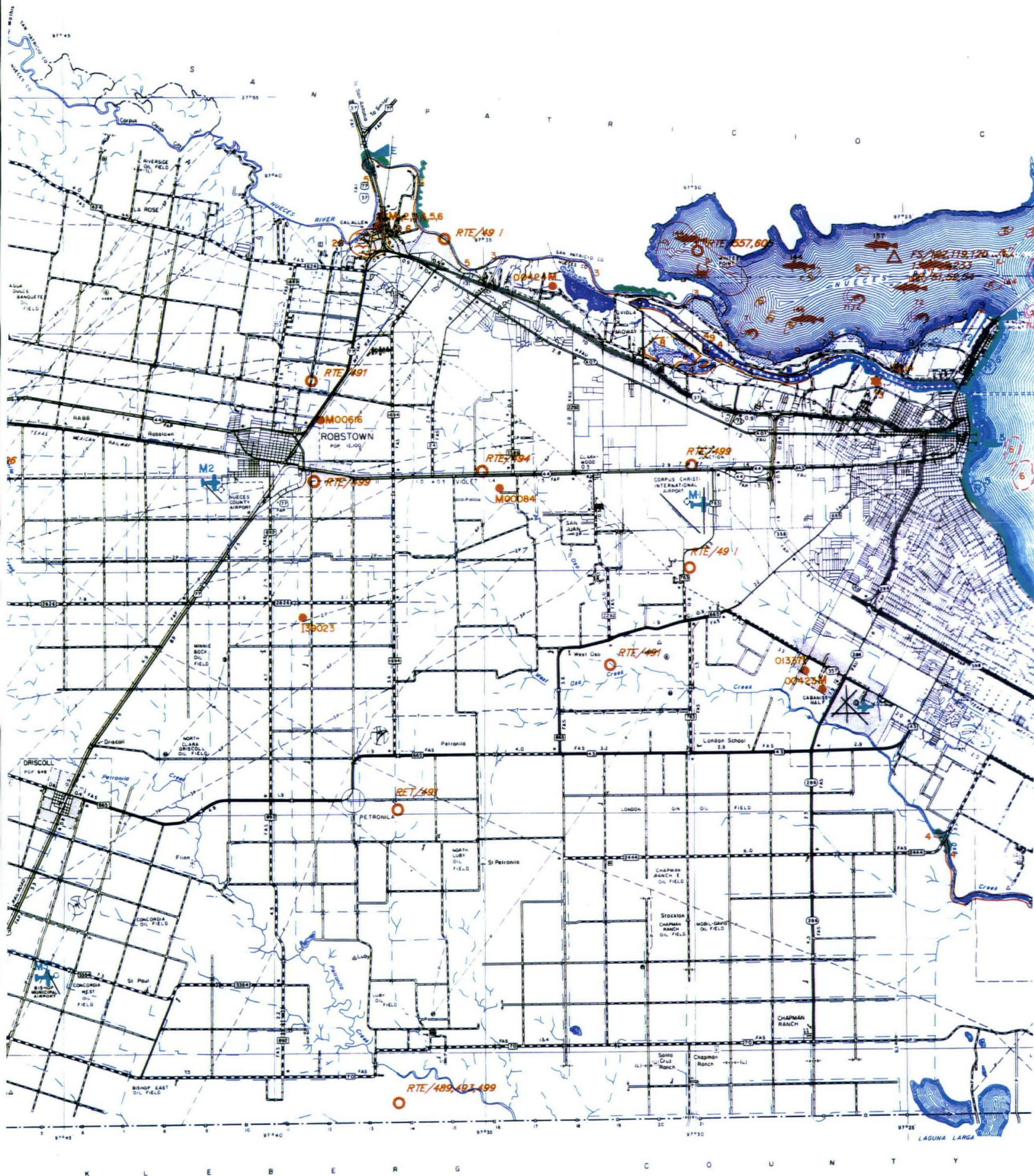


Texas Water Commission  
Post Office Box 13087  
Austin, Texas 78711

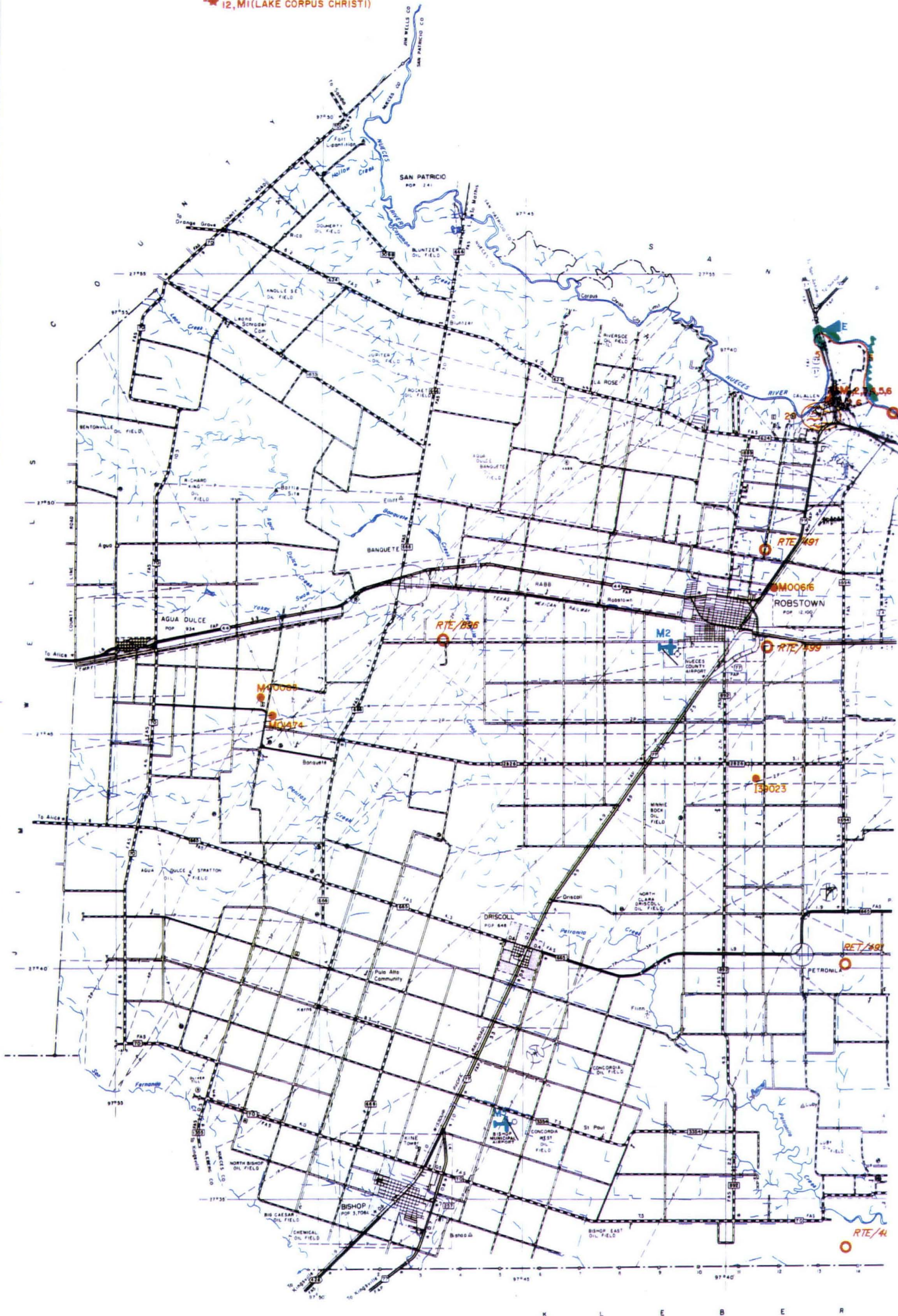
KEY TO SUPPLEMENTARY SHEETS

KEY TO BASE SHEETS

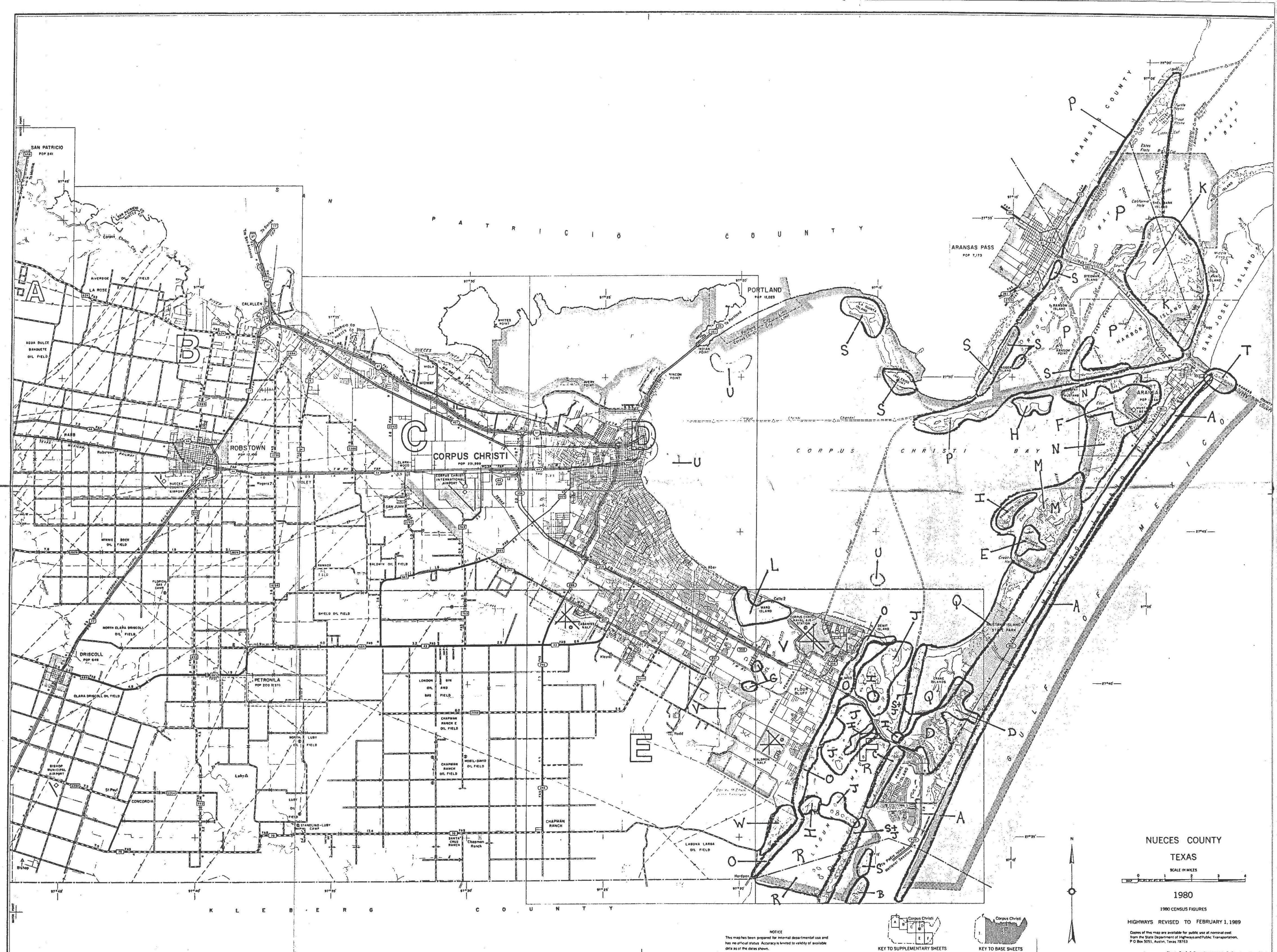
Sheet 2 of 2 base sheets and 4 supplementary sheets



12, MI (LAKE CORPUS CHRISTI)



K L E B E R



NUECES COUNTY  
TEXAS



1980

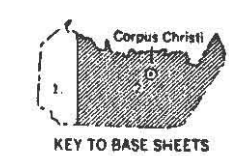
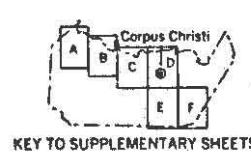
1980 CENSUS FIGURES

HIGHWAYS REVISED TO FEBRUARY 1, 1989

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Sheet 2 of 2 Base Sheets and 6 Supplementary Sheets

NOTICE  
This map has been prepared for internal departmental use and has no official status. Accuracy is limited to the validity of available data as of the dates shown.



## **APPENDIX A — CROSS-REFERENCE LIST**

This section contains the cross-reference list for the Non-Transportation-Related regulatory requirements.

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## CROSS-REFERENCE

EPA MTR FACILITY REQUIRED RESPONSE PLAN SECTIONS	COMPLEX FACILITY RESPONSE PLAN SECTIONS																
	Emergency Action Plan											Facility Response Plan					
	A	B	C	D	E	F	G	H	I	J	Annex 1	1	2	3	4	5	6
1. Emergency Response Action Plan	A-1																
Emergency Response Coordinator Information	A-1																
Emergency Notification Phone List		B-1															
Spill Response Notification Form			C-1														
Equipment List and Location						F-18 to F-28											
Facility Response Team					E-44												
Evacuation Plan									I-1								
Immediate Actions				D 3 to D-18													
Facility Diagram										J 1		TAB 1					
2. Facility Information												1-4					
a. Facility Name	ix											1-4					
Street Address	ix											1-4					
City	xi											1-4					
County	ix											1-4					
State	ix											1-4					
ZIP Code	ix											1-4					
Telephone Number	ix											1-4					
b. Main Entrance Latitude and Longitude	ix											1-4					
c. Wellhead Protection Area												1-4					
d. Name of Facility Owner and Operator	ix											1-4					
Address of Owner If Different	ix											1-4					
e. Name of Emergency Response Coordinator	ix											1-4					
Position	ix											1-4					

## CROSS-REFERENCE

EPA RTR FACILITY REQUIRED RESPONSE PLAN SECTIONS	COMPLEX FACILITY RESPONSE PLAN SECTIONS															
	Facility Response Plan (Cont'd)											Appendices				
	7	8	9	10	11	12	13	14	15	16	17	A	B	C	D	E
1 Emergency Response Action Plan																
Emergency Response Coordinator Information																
Emergency Notification Phone List																
Spill Response Notification Form																
Equipment List and Location																
Facility Response Team																
Evacuation Plan																
Immediate Actions																
Facility Diagram																
2. Facility Information																
a. Facility Name																
Street Address																
City																
County																
State																
ZIP Code																
Telephone Number																
b. Main Entrance Latitude and Longitude																
c. Wellhead Protection Area																
d. Name of Facility Owner and Operator																
Address of Owner if Different																
e. Name of Emergency Response Coordinator																
Position																
Address																

## CROSS-REFERENCE

EPA MTR FACILITY REQUIRED RESPONSE PLAN SECTIONS	COMPLEX FACILITY RESPONSE PLAN SECTIONS																
	Emergency Action Plan											Facility Response Plan					
	A	B	C	D	E	F	G	H	I	J	Annex 1	1	2	3	4	5	6
Address	ix											1-4					
Emergency Phone Number	ix											1-4					
Training Experience													2-15				
f Date of Oil Storage Start-Up												1-7					
g Current Operation Description and SIC Code	ix											1-7					
h. Dates and Type of Substantial Expansion												1-7					
i Date of Last Update	See Footers																
3. Emergency Response Information																	
a. Emergency Notification Phone List	A-1	B-1															
b Spill Response Notification Form			C-1														
c Emergency Response Equipment List:																	
Type, Model, Year, Number, Capability, Storage Location, Equipment Test Date						F-18 to F-29											
d. Response Personnel																	
i. Facility Response Personnel -					E-44												
Name, Phone, Response Time, Responsibility, and Training Type and Date					E-44												
ii Facility Response Team -					E-38												
Coordinator, Response Time, and Day/Evening Phone					E-38												
iii Response Contractors -					E-44												
Name, Phone, Response Time, Responsibility and Evidence of Contracts/Agreements					E-44												
e Evacuation Plans									TAB 1	J 1			2-53				
f Emergency Coordinator Duties													2-53				
4. Hazard Evaluation														TAB 3			
a. Hazard Identification:														TAB 3			

## CROSS REFERENCE

EPA RTR FACILITY REQUIRED RESPONSE PLAN SECTIONS	COMPLEX FACILITY RESPONSE PLAN SECTIONS															
	Facility Response Plan (Cont'd)											Appendices				
	7	8	9	10	11	12	13	14	15	16	17	A	B	C	D	E
Emergency Phone Number																
Training Experience																
f. Date of Oil Storage Start-Up																
g. Current Operation Description and SIC Code																
h. Dates and Type of Substantial Expansion																
i. Date of Last Update																
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c. Emergency Response Equipment List:																
Type, Model, Year, Number, Capability, Storage Location, Equipment Test Date																
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i. Facility Response Personnel -																
Name, Phone, Response Time, Responsibility, and Training Type and Date																
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Coordinator, Response Time, and Day/Evening Phone																
iii. Response Contractors -																
Name, Phone, Response Time, Responsibility and Evidence of Contracts/Agreements																
e. Evacuation Plans																
f. Emergency Coordinator Duties																
4. Hazard Evaluation																
a. Hazard Identification:																
i. Above and Below Ground Tanks -																
ID, Maximum Capacity, Substance Stored, Quantity, Tank Type, Year Installed and Cause and Date of Any Tank Failure Resulting in Spill																

## CROSS-REFERENCE

EPA MTR FACILITY REQUIRED RESPONSE PLAN SECTIONS	COMPLEX FACILITY RESPONSE PLAN SECTIONS																
	Emergency Action Plan											Facility Response Plan					
	A	B	C	D	E	F	G	H	I	J	Annex 1	1	2	3	4	5	6
i Above and Below Ground Tanks -														3-2 to 3-3			
ID, Maximum Capacity, Substance Stored, Quantity, Tank Type, Year Installed and Cause and Date of Any Tank Failure Resulting in Spill														3-2 to 3-3			
ii Surface Impoundments														3-4			
ID, Maximum Capacity, Substance Stored, Quantity, Surface Area, Year Put in Service and Cause and Date of Any Failure Resulting in Spill														3-4			
iii Facility Schematic Showing Tanks and Surface Impoundments										J 1							
iv Facility Operations -														3-6 to 3-7			
Truck, Railroad Car, and Vessel Transfer Operations and Transfer Volumes Involved														3-6 to 3-7			
Daily Operations Presenting Risk of Spills and Volumes Involved														3-6 to 3-8			
Secondary Containment Volume Associated With Each Tank and Transfer Point														3-5			
Normal Daily Throughput for Facility and Effect of Changes on Potential Release Volumes														3-7			
b. Vulnerability Analysis of Environmentally Sensitive Areas and Areas of Economic Importance														3-9 to 3-11			
c Analysis of the Potential for A Spill														3-17 to 3-20			
i Description of Reportable Spill History-														3-21			
Discharge Date														3-21			
Cause														3-21			
Material Discharged														3-21			
Amount														3-21			
Amount Reaching Navigable Waters														3-21			
Effectiveness and Capacity of Secondary Containment														3-21			
Cleanup Actions														3-21			

## CROSS REFERENCE

EPA MTR FACILITY REQUIRED RESPONSE PLAN SECTIONS	COMPLEX FACILITY RESPONSE PLAN SECTIONS															
	Facility Response Plan (Cont'd)											Appendices				
	7	8	9	10	11	12	13	14	15	16	17	A	B	C	D	E
i Surface Impoundments -																
ID, Maximum Capacity, Substance Stored, Quantity, Surface Area, Year Put in Service and Cause and Date of Any Failure Resulting in Spill																
iii Facility Schematic Showing Tanks and Surface Impoundments											TAB 18					
iv Facility Operations -																
Truck, Railroad Car, and Vessel Transfer Operations and Transfer Volumes Involved																
Daily Operations Presenting Risk of Spills and Volumes Involved																
Secondary Containment Volume Associated With Each Tank and Transfer Point																
Normal Daily Throughput for Facility and Effect of Changes on Potential Release Volumes																
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Cause																
Material Discharged																
Amount																
Amount Reaching Navigable Waters																
Effectiveness and Capacity of Secondary Containment																
Cleanup Actions																
Steps to Reduce Recurrence																
Tank or Impoundment Storage Capacity from which Discharged																
Enforcement Actions																
Monitoring Equipment Effectiveness																

## CROSS-REFERENCE

EPA MTR FACILITY REQUIRED RESPONSE PLAN SECTIONS	COMPLEX FACILITY RESPONSE PLAN SECTIONS																
	Emergency Action Plan											Facility Response Plan					
	A	B	C	D	E	F	G	H	I	J	Annex 1	1	2	3	4	5	6
Steps to Reduce Recurrence														3-21			
Tank or Impoundment Storage Capacity from Which Discharged														3-21			
Enforcement Actions														3-21			
Monitoring Equipment Effectiveness														3-21			
Detection of Spills														3-21			
5. Discharge Scenarios															4-1 to 4-8		
a. Small and Medium Discharge																	
b. Worst-Case Discharge															4-8		
6. Discharge Detection System																	
a. Discharge Detection by Personnel -																5-1	
Procedures and Personnel during Regular Operations and after Hours and Initial Response Actions																5-1	
b. Automated Discharge Detection -																5-3	
Equipment, Verification Plan, and Postverification Actions																5-3	
7. Plan Implementation																	
a. Response Resources for Small, Medium, and Worst-Case Spills -																	
i. Resources for Responding to Spill Scenarios																	6-1 to 6-18
ii. Emergency Plans for Spill Response																	6-1 to 6-18
iii. Additional Training																	6-1 to 6-18
iv. Access to Additional Equipment and Experts																	6-1 to 6-18
v. Ability to Implement Plan Including Training and Practice Drills																	6-1 to 6-18

## CROSS-REFERENCE

EPA RTR FACILITY REQUIRED RESPONSE PLAN SECTIONS	COMPLEX FACILITY RESPONSE PLAN SECTIONS															
	Facility Response Plan (Cont'd)											Appendices				
	7	8	9	10	11	12	13	14	15	16	17	A	B	C	D	E
Detection of Spills																
5. Discharge Scenarios																
a. Small and Medium Discharge																
b. Worst-Case Discharge																
6. Discharge Detection System																
a. Discharge Detection by Personnel -																
Procedures and Personnel During Regular Operations and after Hours and Initial Response Actions																
b. Automated Discharge Detection -																
Equipment, Verification Plan and Postverification Actions																
7. Plan Implementation																
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i. Resources for Responding to Spill Scenarios																
ii. Emergency Plans for Spill Response																
iii. Additional Training																
iv. Access to Additional Equipment and Experts																
v. Ability to Implement Plan Including Training and Practice Drills																
b. Disposal Plans																
i. Recovery, Reuse, Decontamination, and Disposal Methods																
ii. Transportation/Disposal Permits																
iii. Recovered Product, Contaminated Soil, Equipment and Materials, Personal Protective Equipment, Decontamination Solutions, Adsorbents, and Spent Chemicals																

## CROSS-REFERENCE

EPA MTR FACILITY REQUIRED RESPONSE PLAN SECTIONS	COMPLEX FACILITY RESPONSE PLAN SECTIONS																
	Emergency Action Plan											Facility Response Plan					
	A	B	C	D	E	F	G	H	I	J	Annex 1	1	2	3	4	5	6
b Disposal Plans																	8-18 to 8-21
i. Recovery, Reuse, Decontamination, and Disposal Methods								H-1									8-18 to 8-21
ii Transportation/Disposal Permits								H-1									8-18 to 8-21
iii Recovered Product, Contaminated Soil, Equipment and Materials, Personal Protective Equipment, Decontamination Solutions, Adsorbents, and Spent Chemicals								H-1									8-18 to 8-21
c Containment and Drainage Planning														3-5			
Containment Volume														3-5			
Route of Drainage from Storage and Transfer Areas										J-1							
Drainage Trough Construction Materials																	
Valve and Separator Types and Numbers																	
Sump Pump Capacities														3-5			
Capacities and Locations of Weirs and Booms						F-17											
Other Cleanup Materials						F-18 to F-20											
8. Self-Inspection, Training, and Meeting Logs																	
a. Facility Self-Inspection -																	
Tank and Surface Impoundment Secondary Containment																	
Response Equipment																	
b Mock Alert Drills																	
c. Training and Meeting Logs -																	
Personnel Training																	
Discharge Prevention Meetings Log																	
9. Diagrams										TAB J							

## CROSS-REFERENCE

EPA MTR FACILITY REQUIRED RESPONSE PLAN SECTIONS	COMPLEX FACILITY RESPONSE PLAN SECTIONS															
	Facility Response Plan (Cont'd)											Appendices				
	7	8	9	10	11	12	13	14	15	16	17	A	B	C	D	E
c. Containment and Drainage Planning																
Containment Volume																
Route of Drainage from Storage and Transfer Areas																
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Valve and Separator Types and Numbers																
Sump Pump Capacities											TAB 18					
Capacities and Locations of Weirs and Booms																
Other Cleanup Materials																
8. Self-Inspection, Training, and Meeting Logs	7.1	8.1														
a. Facility Self Inspection -	7.1															
Tank and Surface Impoundment Secondary Containment	7.1															
Response Equipment	7.5															
b. Mock Alert Drills		8.29														
c. Training and Meeting Logs -		8.29														
Personnel Training		8.29														
Discharge Prevention Meetings Log		8.37														
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Scaled Drawing of Facility											TAB 18					
Above and Below Ground Storage Tanks											TAB 18					
Contents and Capacities of Storage Tanks											TAB 18					
Contents and Capacities of Impoundments											TAB 18					
Process Buildings											TAB 18					
Transfer Areas											TAB 18					

## CROSS-REFERENCE

EPA NTR FACILITY REQUIRED RESPONSE PLAN SECTIONS	COMPLEX FACILITY RESPONSE PLAN SECTIONS																
	Emergency Action Plan											Facility Response Plan					
	A	B	C	D	E	F	G	H	I	J	Annex 1	1	2	3	4	5	6
a. Site Plan Diagram -										J-1							
Scaled Drawing of Facility										J-1							
Above and Below Ground Storage Tanks										J-1							
Contents and Capacities of Storage Tanks										J-1							
Contents and Capacities of Impoundments										J-1							
Process Buildings																	
Transfer Areas										J-1							
Location and Capacities of Secondary Containment Systems										J-1							
Hazardous Materials Storage Structures, Storage Capacities, and Materials Stored										J-1							
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b. Site Drainage Plan Diagram -										J-1							
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Surface Water Receiving Streams										J-1							
Firefighting Water Sources										J-1							
Other Utilities										J-1							
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Regrouping Area Locations									TAB I	J-1							
10. Security																	

## CROSS-REFERENCE

EPA MTR FACILITY REQUIRED RESPONSE PLAN SECTIONS	COMPLEX FACILITY RESPONSE PLAN SECTIONS															
	Facility Response Plan (Cont'd)											Appendices				
	7	8	9	10	11	12	13	14	15	16	17	A	B	C	D	E
c. Containment and Drainage Planning																
Containment Volume																
Route of Drainage from Storage and Transfer Areas																
Drainage Trough Construction Materials																
Valve and Separator Types and Numbers																
Sump Pump Capacities											TAB 18					
Capacities and Locations of Weirs and Booms																
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8. Self-Inspection, Training, and Meeting Logs	7.1	8.1														
a. Facility Self-Inspection	7.1															
Tank and Surface Impoundment Secondary Containment	7.1															
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b. Mock Alert Drills		8.29														
c. Training and Meeting Logs -		8.29														
Personnel Training		8.29														
Discharge Prevention Meetings Log		8.37														
8. Diagrams											TAB 18					
a. Site Plan Diagram -											TAB 18					
Scaled Drawing of Facility											TAB 18					
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Process Buildings											TAB 18					
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## CROSS-REFERENCE

EPA MTR FACILITY REQUIRED RESPONSE PLAN SECTIONS	COMPLEX FACILITY RESPONSE PLAN SECTIONS															
	Facility Response Plan (Cont'd)											Appendices				
	7	8	9	10	11	12	13	14	15	16	17	A	B	C	D	E
Location and Capacities of Secondary Containment Systems											TAB 18					
Hazardous Materials Storage Structures, Storage Capacities and Materials Stored											TAB 18					
Communication and Response Equipment Locations											TAB 18					
Locations of Electrical Equipment Which Contains Oil											TAB 18					
b. Site Drainage Plan Diagram -											TAB 18					
Major Sanitary and Storm Sewers, Manholes, and Drains											TAB 18					
Weirs and Shutoff Valves											TAB 18					
Surface Water Receiving Streams											TAB 18					
Firefighting Water Sources											TAB 18					
Other Utilities											TAB 18					
Response Personnel Ingress and Egress											TAB 18					
Equipment Transportation Routes											TAB 18					
Direction of Spill Flow																
c. Site Evacuation Plan Diagram -																
Evacuation Routes																
Regrouping Area Locations																
10. Security			8-1													

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## **APPENDIX B — CONTRACTS, MOUs, IAGs, AND OTHER GOVERNMENT SUPPORT AGREEMENTS**

### **Outline Note**

**This section contains copies of all contracts with oil spill response organizations, hazardous waste transporters, hazardous waste disposal facilities, Memoranda of Understanding between the Navy and other governmental agencies, Inter Agency Agreements between the Navy and other DoD activities and other support agreements such as oil spill cooperative agreements.**

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## **APPENDIX B — CONTRACTS, MOUs, IAGs, AND OTHER GOVERNMENT SUPPORT AGREEMENTS**

The following items are contained in this section as per federal regulation:

- a. Evidence of Contractor Agreement between the Corpus Christi Area Oil Spill Control Association (CCAOSCA) and Naval Station Corpus Christi.
- b. USCG OSRO Classification for CCAOSCA dated March 23, 1993.
- c. CCAOSCA Spill Drill Log Summary of September 26, 1994, delineating Response Equipment Testing and Deployments.
- d. CCAOSCA Incident Command Program: Customer/Responsible Party organizational diagram showing contractor roles and responsibilities of personnel assigned.
- d. NAVSUPSALV Spill Response Equipment Inventory.

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1231 NAVIGATION BLVD

TELEPHONE 512 882 2456



P O BOX 717

CORPUS CHRISTI TEXAS 78403

Capt. Donald E. Peters  
United States Navy  
Naval Station Ingleside/Naval Air Station Corpus Christi

This letter shall serve as receipt of dues for 1995 and also confirm that the Corpus Christi Area Oil Spill Control Association is under contract to provide "Average most probable spill response" and "Maximum most probable spill response" for your operations in Nueces, San Patricio and Aransas counties. "Average most probable spill" response shall consist of deploying up to 1,000 ft of 18" containment boom within one hour of notification and initiate recovery of 50 bbl/day with 100 bbl storage within two hours of notification as required by OPA 90'. Routine initial response by CCAOSCA is by three personnel

"Maximum most probable spill" response by CCAOSCA will include up to 12,000 ft of 18" boom, 1250 bbl/day recovery with 2,500 bbl storage and 24 personnel for a 6-hour deployment time

Response to Mesquite Bay and Carlos Bay may take more than one hour. Mobilization time for CCAOSCA varies but should not exceed 30 minutes. Simultaneous responses often occur and initial response may then be reduced to two personnel. In addition to its office, warehouse, and dock at 1231 E. Navigation Blvd., CCAOSCA has pre-staged boom at Conn Brown Harbor and the Tule Lake Turning Basin.

Sincerely,

  
James Conn  
General Manager

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10/17/91  
93-033/2

WA 7:11

Mr. James Conn  
Corpus Christi Area Oil Spill Control Association  
P.O. Box 717  
Corpus Christi, TX 78403

Dear Mr. Conn:

I have completed a revision to your previous application for classification as an Oil Spill Removal Organization as outlined in Coast Guard Navigation and Vessel Inspection Circular 12-92 (NVIC 12 92). A review of your organization's resources has resulted in the following determination:

INTERIM CLASSIFICATION for the following environments:

River/Canal: Class B  
Inland/Nearshore: Class B

Enclosure (1) to this letter provides a summary of the response resources available at each of your sites. You should provide this list to your potential clients to help them determine if you can provide sufficient resources to the required location(s) within the response times necessary for their response plans. This determination should include both mobilization times and transit times as outlined in NVIC 7-92 and NVIC 8-92.

You will be contacted separately by the Coast Guard in order to schedule the visit necessary to process your application for final classification. If you have any questions regarding your classification, please contact my staff.

Sincerely,

*D. S. Jensen*  
D. S. JENSEN  
Captain, U.S. Coast Guard  
Commanding Officer

Encl: (1) Resource Summary Printout

Copy: COMDT(G-MEP)  
CCGD8(m)  
MSO CORPUS CHRISTI  
GST

OWNO NAME: Corpus Christi Area Oil Spill Control Association  
 LOCATION: P.O. Box 117, Corpus Christi, TX 78403  
 21-40°N 097°24'W  
 011 (Unallocated) 0000 00 0000 000000 TX.  
 012 (Unallocated) 0000 00 0000 000000 TX.  
 013 (Unallocated) 0000 00 0000 000000 TX.

BOAT	SIZE	HT	QTY	RC	IC	CLC	UC
10000	SITE 1	10	5000	5000	5000	0	0
10000	SITE 1	21	500	500	500	0	0
10000 on order	SITE 1	15	3000	3000	3000	0	0
10000	SITE 1	15	3500	3500	3500	0	0
TOTAL BOOM:			12000	11500	12000	0	0

(CONTAINMENT/PROTECTIVE)  
 RIVER/CANAL BOOM 11500 (4000/8000)  
 BEACH/NEARSHORE 10000 (6000/6000)  
 NOTE: PROTECTIVE BOOM MAY BE EITHER CONTAINMENT BOOM OR OTHER BOOM

RECOVERY EQUIPMENT (PUMP IN BRLS/DAY) (SUCY - SHALLOW WATER CAPABLE?)

NAME/MODEL/TYPE	SIZE	QTY	GPH	"E"	EDRC	S/W?	VAC TRUCKS?
Slackmatt Slurp, SLADICIN 1		2	44	0.2	603	603	0
Slackmatt 1/2" HANNA MAY		1	60	0.2	411	411	0
Slackmatt SKIMPAC 2000, W/3"		1	33	0.2	228	228	0
Slackmatt SKIMPAC 1800, W/3"		1	100	0.2	2057	2057	0
TOTAL PIECES OF EQPT:		5			3300	3300	0
TOTAL BRLS/DAY:		3300					VAC TRUCK RATIO: 0.000

TEMPORARY STORAGE CAPACITY (IN BRLS)

DESCRIPTION/LOCATION	CAP	QTY	PORTABLE	SUCY	FIXED
Oil bag 500, SITE 1	12	1	12	12	0
Oil bag 1000, SITE 1	24	1	24	24	0
Oil bag 2500, SITE 1	60	1	60	60	0
Tank Trailer, SITE 1	60	1	60	60	0
Tank Truck, SITE 1	75	1	75	75	0
T/O, SITE 3	6333	1	6333	0	0
TA/24' LHM, SITE 1	20	1	20	20	0
TA/20' LHM, SITE 1	12	1	12	12	0
TOTALS:		8	6596	263	0
TOTAL CAPACITY:	6596				SHALLOW WATER RATIO: 0.0399

PERSONNEL AVAILABLE AT EACH SITE:

PERSONNEL AT EACH SITE	F/T	P/T	F/T	P/T	F/T	P/T
CCAOSCA SITE 1	4	0	2	0	0	0
James Lease Service SITE 4	0	0	0	0	0	18
PERSONNEL TOTALS:	4	0	2	0	0	18

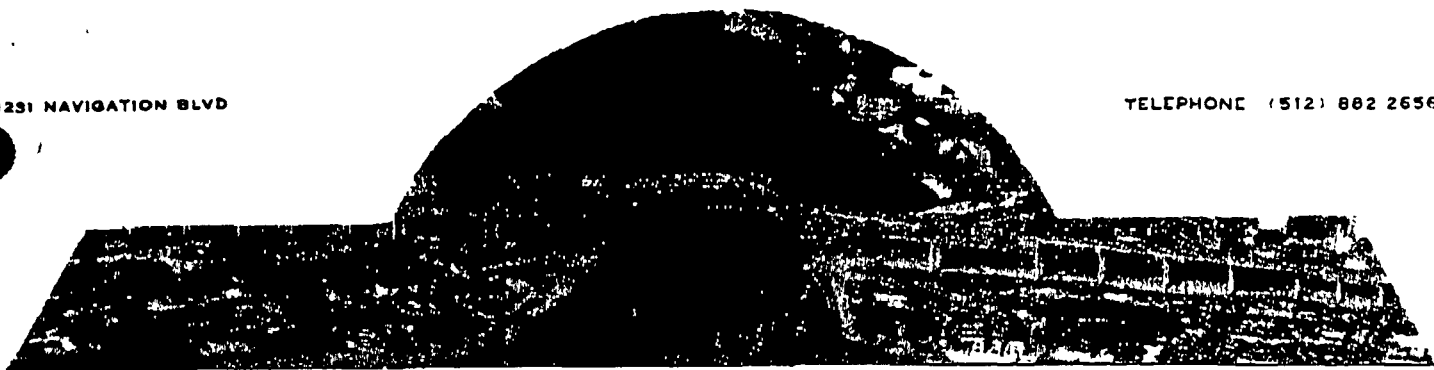
BOATS AVAILABLE	SITE #	QTY	DESCRIPTION
CCAOSCA	SITE 1	1	16' Jon boat w/ON a trailer
	SITE 1	4	19' Semi-v w/ON a trailer
	SITE 1	1	21' Airboat w/trailer
	SITE 1	1	28' Pontoon deckboat w/ON a trailer
	SITE 1	1	28' Fiberglass Uniflite twin/inboard no-trailer
TOTAL:		8	

CLASSIFICATION: LEVEL B - R/C, I/M  
 REVISION TO PREVIOUS CLASSIFICATION:

*David M. Giraitis*  
 DAVID M. GIRAITIS, CDR, USCG

1231 NAVIGATION BLVD

TELEPHONE (512) 882 2656



P O BOX 717

CORPUS CHRISTI TEXAS 78403

CCAOSCA SPILL DRILL LOG  
SUMMARY  
September 26, 1994

November 10, 1993 - National Spill Control School class at CCAOSCA dock-deployed 200ft boom and practiced corralling simulated spill consisting of dog food. practiced deployment of collection boom from 24' skimmer at dock

November 23, 1993 - responded to Rincon Channel-Corpus Christi Ship Channel intersection with 24' skimmer, 28' response boat and 25bbl floating oil storage bag and commenced skimming a simulated spill from a grounded vessel.

December 13, 1993 - Responded to Rincon Harbor flats with airboat and crew for practicing shallow water response.

February 22 & March 8, 1994 - Responded to Tule Lake Turning Basin with vacuum truck with slurp skimmer and response boat. Deployed 500 feet of 18" boom that is staged at Citgo Dock 3.

March 2, 1994 - National Spill Control School at CCAOSCA location. CCAOSCA staff and three personnel from James Lease Service operated Exxon built shallow water skimmer and practiced spill corralling with two boats and 100 ft boom from reel on dock.

March 7, 1994 - Practiced shoreline and dock cleaning with CCAOSCA 19' pump boat.

March 10, 1994 - Surprise drill called by U.S. Coast Guard for PG&E Offshore Resources Company facility on St. Joseph Island. Deployed 1,500 feet of containment boom and Skim-Pac portable skimmer with James Lease Service, Coastal Production, Bass Enterprises Production Co., and PG&E Personnel.

April 13, 1994 - National Spill Control School at CCAOSCA location. CCAOSCA staff operated 28' catamaran skimmer and 19' work boat as well as assorted skimmer heads and diesel pump. Staff practiced spill corralling with skimmer and boat and 100 ft. 18" boom.

June 8, 1994 - Participated in TGLO sponsored drill at Koch Industries, Ingleside, Texas. The Association responded with 4 staff, and 2 contract personnel. a 19' response boat and 28' skimming vessel. The Association deployed 1,500 feet of 18"

boom at Dagger Island, deployed and operated 28' shallow water skimmer, and also deployed a diesel pump, portable skimmer, and towable oil bag along the Corpus Christi Ship Channel shoreline.

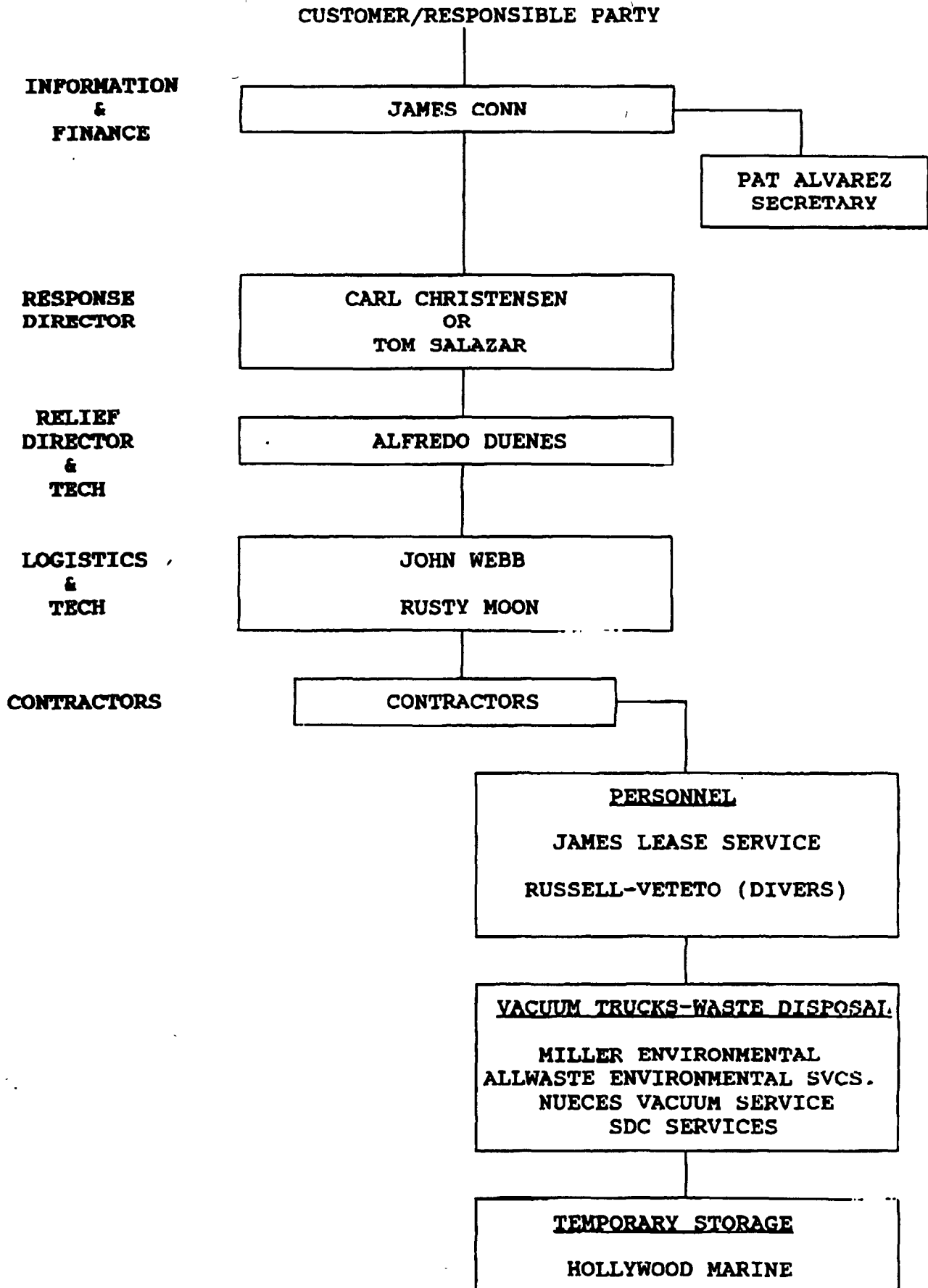
June 22, 1994 - National Spill Control School class at CCAOSCA dock. CCAOSCA staff operated 28' shallow water catamaran skimmer, response boat, diesel pump, Skim-Pak "1800" and Slickbar "Slurp" skimmers. Staff practiced on-the-run skimming and J-boom skimming using 200' of 18" ACME Boom.

August 4, 1994 - National Spill Control School class at CCAOSCA dock. CCAOSCA staff operated 28' shallow water catamaran skimmer, response boat, diesel pump, Skim-Pak "1800" and Slickbar "Slurp" skimmers. Staff practiced on-the-run skimming and J-boom skimming using 200' of 18" ACME Boom.

September 14, 1994 - National Spill Control School class at CCAOSCA dock. CCAOSCA staff operated 28' shallow water catamaran skimmer, 2 response boats, diesel pump and Slickbar "Slurp" skimmer. Staff practiced oil corralling with 100' of 18" ACME boom. Staff Practiced on-the-run skimming using skimmer, two response boats and 200' of 18" ACME boom.

**CORPUS CHRISTI AREA OIL SPILL CONTROL ASSOCIATION****INCIDENT COMMAND PROGRAM**

November 15, 1994



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# SUPSALV OIL SPILL RESPONSE EQUIPMENT INVENTORY

Equipment Description	Location and Quantity			
	<u>Williamsburg, VA</u>	<u>Stockton, CA</u>	<u>Anchorage, AK</u>	<u>Pearl Harbor, HI</u>
<b>Spilled Oil Recovery</b>				
Skimmer Vessel System (36' Aluminum Hull)	10	9	3	2
Skimmer System (Sorbent Belt VOSS)	1	0	1	0
Skimming System (Screw Pump VOSS)	2	1	1	0
Skimmer, Sorbent Rope Mop (36")	1	1	1	0
Skimmer, Sorbent Rope Mop (18")	0	0	1	0
Boom Van (18" x 350' Fire Boom)	1	0	0	0
Boom Van (42" x 1,980' Boom)	5	4	2	1
Boom Mooring System	31	28	12	4
Boom Handling Boats (24' 260 hp Diesel)	8	8	2	2
Boom Tending Boats (19' & 23' Inflatable)	2	1	1	1
Boom Tending Boats (18' Workboat)	4	3	3	1
136K Oil Storage Bladder	6	4	1	0
26K Oil Storage Bladder	2	2	1	2
290K Oil Storage Bladder	0	0	2	0
<b>Casualty Offloading</b>				
Pump System, POL 6" Submersible	4	5	2	4
Floating Hose (6" x 100')	58	0	0	0
Hot Tap System	1	1	0	1
Boarding Kit	1	0	1	1
Fender System (8' x 12' Foam)	3	4	0	0
Fender System (14' x 60' LP Air)	4	4	0	0
Fender System (10' x 50' LP Air)	8	15	1	0
<b>Ancilliary Equipment</b>				
Command Trailer				
(40' Communications and Command Center)	1	1	0	0
Command Van				
(20' Communications and Command Center)	3	1	1	1
Shop Vans	2	1	1	1
Rigging Vans	2	1	1	1
Personnel Bunk Vans	2	0	0	0
Beach Tranfer System (4-WD Vehicles)	1	0	0	0
Communication System (Satellite Phone, Land)	1	0	1	0
Communication System (Satellite Phone, Ship)	2	0	0	0
Oil/Water Separator (Parallel Plate 100 gpm)	1	2	0	0
Cleaning System	1	0	1	1

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## **APPENDIX C — FACILITY CLASSIFICATION, DISCHARGE PLANNING VOLUMES, RESPONSE DISTANCES**

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C.2 TABLES .....	FRP: APPENDIX C-2

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Table Appendix C.2	Data For Deriving NTR Facility Discharge Planning Volumes .....	FRP: APPENDIX C-3
Table Appendix C.3	NTR Facility Worst Case Discharge Volume For Type I Oil .....	FRP: APPENDIX C-4
Table Appendix C.4	Worst-Case Discharge On-Water And On shore Recovery Planning Volumes For Type 1 Oil, NTR Facility .....	FRP: APPENDIX C-5
Table Appendix C.5	Discharge Planning Volume Summary For Complex Facility .....	FRP: APPENDIX C-6
Table Appendix C.6	NTR Facility Response Planning Distance .....	FRP: APPENDIX C-7

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## **APPENDIX C — FACILITY CLASSIFICATION, DISCHARGE PLANNING VOLUMES, RESPONSE DISTANCES**

### **C.1 INTRODUCTION**

This appendix contains information and derivations to establish:

- The harm classifications for the NTR components of NAS Corpus Christi.
- The tiered oil discharge planning volumes, the response capabilities required, and the discharge planning distances under the EPA and RSPA OPA 90 implementing regulations.

## C.2 TABLES

The following tables contain the information described in Section C.1:

Table Appendix C.1, NTR Facility Classification — The NTR facility of NAS Corpus Christi is a substantial harm facility under the EPA regulations. This table shows the applicable criteria for this classification.

Table Appendix C.1 NTR Facility Classification	
Maximum oil storage capacity is 1,388,700 gallons. Is this greater than 42,000 gallons <u>and</u> do operations include over-the-water transfers of oil to and from vessels?	
Check	Classification
	Yes, NTR facility is a substantial harm facility and a response plan is required.
If no, is the maximum oil storage capacity equal to or greater than 1 million gallons?	
	No, a response plan submission is not required unless required by the EPA Regional Administrator.
If yes, is there adequate secondary containment for each aboveground storage area sufficiently large to contain the capacity of the largest aboveground tank within each storage area?	
X	No, NTR facility is a substantial harm facility and a response plan submission is required.
If yes, is the facility located at a distance from an environmentally sensitive area (40 CFR 112, Appendix D) or public drinking water intake such that a discharge from the facility could cause injury to the environmentally sensitive area or shut down the public drinking water intake?	
	Yes, NTR facility is a substantial harm facility and a response plan is required.
If no, has the facility had a reportable spill in an amount equal to or greater than 10,000 gallons within the past 5 years?	
	Yes, NTR facility is a substantial harm facility and a response plan is required.
	No, a response plan submission is not required unless required by the EPA Regional Administrator.

Table Appendix C.2, Data For Deriving NTR Facility Discharge Planning Volumes — This table contains facility data for computing the worst-case discharge planning volume for the NTR facility.

Table Appendix C.2 Data For Deriving NTR Facility Discharge Planning Volumes				
Facility Operating Area			Inland	
Type Of Oil Handled			I	
Type Of Oil	Total Capacity Stored With Adequate Secondary Containment (gals) [A]	Total Capacity Stored Without Adequate Secondary Containment (gals) [B]	Total Facility Storage Capacity (gals) [C]	Capacity Of Largest Ag Tank In Secondary Containment (gals) [D]
I	96,4042	424,658	1,388,770	400,000
Comments on Secondary Containment Capacity				
<b>Note:</b> Identification of Secondary Containment capacity was based on the SPCC plan for NAS Corpus Christi. Where Secondary Containment was stated as adequate, the total volume was used. Where secondary containment was merely noted as being present, a field survey was conducted and the capacity calculated (see FRP, Section 3, Table FRP 3.4).				
Storage Capacity Of Permanently Manifolded Tanks				
Oil Type	Manifolded Tank Numbers	Combined Capacity (gals) [E]		
	None	0		

Table Appendix C.3, NTR Facility Worst-Case Discharge Volume for Type I Oil — This table contains the computation of the worst-case discharge volume for the NTR facility Type I oil transferred.

<b>Table Appendix C.3</b> <b>NTR Facility Worst Case Discharge Volume For Type I Oil</b>		
<b>Check</b>	<b>Criteria And Method</b>	<b>Worst-Case Discharge Volume (gals)</b>
	Total facility capacity stored without adequate secondary containment:  Worst-case discharge = C, Table C.2	
	Total facility capacity stored in adequate secondary containment and nearest opportunity for discharge <u>is not</u> adjacent to navigable water:  Worst-case discharge = Largest of D or E, Table C.2	
	Total facility capacity stored in adequate secondary containment and nearest opportunity for discharge <u>is</u> adjacent to navigable water:  Worst-case discharge = 110% of D or E, Table C.2, whichever is the largest	
	Total facility capacity <u>not</u> stored in adequate secondary containment and nearest opportunity for discharge <u>is not</u> adjacent to navigable water:  Worst-case discharge = From Table C.2, B + (Either D or E, whichever is the largest)	
X	Total facility capacity <u>not</u> stored in adequate secondary containment and nearest opportunity for discharge <u>is</u> adjacent to navigable water:  Worst-case discharge = From Table C.2, B + (110% of D or E, whichever is the largest)	864,658

Table Appendix C.4, Worst Case Discharge On-Water and On shore Recovery Planning Volumes For Type I Oil, NTR Facility — This table computes the required tiered on-water oil recovery, on shore oil recovery, and temporary recovered oil storage capacities for the worst-case discharge of Type I oil.

Table Appendix C.4 Worst-Case Discharge On-Water And On shore Recovery Planning Volumes For Type 1 Oil, NTR Facility					
Emulsification Factor	% Recovered Floating Oil	% Oil On shore	On-Water Oil Recovery Resource Mobilization Factors		
[A]	[B]	[C]	Tier 1 [D]	Tier 2 [E]	Tier 3 [F]
1.0	20	10	0.15	0.25	0.40
Tiered On-Water Recovery Planning Volumes					
Tier 1 (gals/day) (Worst-Case Volume)(A)(B)(D)		Tier 2 (gals/day) (Worst-Case Volume)(A)(B)(E)		Tier 3 (gals/day) (Worst-Case Volume)(A)(B)(F)	
25,940		43,233		69,173	
Required Capability For Inland Operating Area					
Note: If operating area is inland, 20% of water recovery capability must be able to operate in water depths equal to or less than 6 ft, i.e., 20% of the above recovery capability for each tier					
Tier 1 (gals/day)		Tier 2 (gals/day)		Tier 3 (gals/day)	
5,188		8,647		13,835	
On shore Recovery Planning Volume (gals) (Worst-Case Volume)(A)(C)				Temporary Oil Storage Capacity 2x Daily Oil Recovery Rate	
		Tier 1 gals/day	Tier 2 gals/day	Tier 3 gals/day	
86,466		51,880	86,466	138,346	

Table Appendix C.5, Discharge Planning Volume Summary for Complex Facility — This table summarizes the tiered discharge planning volumes for each regulated component of the complex facility, except the facility's on shore pipeline (not applicable to NAS Corpus Christi). The complex facility's tiered discharge planning volumes are the greater of the respective NTR and MTR discharge planning tiers.

**Note:** This table summarizes the calculations in this tab.

<b>Table Appendix C.5</b> <b>Discharge Planning Volume Summary For Complex Facility</b>			
<b>Facility Component</b>	<b>Small/Average Most Probable Discharge (gals)</b>	<b>Medium/Maximum Most Probable Discharge (gals)</b>	<b>Worst Case Discharge (gals)</b>
MTR	Not Applicable	Not Applicable	0
NTR	2,100	36,000	864,658
Bulk Paclagomg	Not Applicable	Not Applicable	0
Complex Facility	Not Applicable	Not Applicable	0
<b>Note:</b> For MTR facility — Average most probable is lesser of 2,100 gals or 1% of worst-case discharge volume. Maximum most probable is lesser of 50,400 gals or 10% of worst-case discharge volume. For NTR facility — Small is less than or equal to 2,100 gals, but not greater than the worst-case discharge volume. Medium is up to 36,000 gals, 10% of the capacity of the largest aboveground tank, or the worst-case discharge volume, whichever is the least. For complex facility — The small/average most probable, medium/maximum most probable, and worst-case discharges are the greater of the respective NTR and MTR discharge planning tiers.			

Table Appendix C.6, NTR Facility Response Planning Distance — This table establishes the response planning distance for the NTR facility.

<b>Table Appendix C.6</b> <b>NTR Facility Response Planning Distance</b>				
<b>Moving Tidal Waters</b>				
<b>Note:</b> The spill response planning distances for the NTR component of this response plan are based on the USCG planning distance guidelines established in 33 CFR 154				
Oil Type	C h e c k	Type Of Water	Response Distance Planning Method	Distance In Miles From Facility
II		Nontidal	24 hrs X (maximum current) mph	
I	X	Tidal-Ebb		5
I	X	Tidal-Flood	5 miles or to point of maximum tidal influence, whichever is less	5
II, III, IV, V, Non-petroleum		Nontidal	48 hrs X (maximum current) mph	
II, III, IV, V, Non-petroleum		Tidal-Ebb		15
II, III, IV, V, Non-petroleum		Tidal-Flood	15 miles or to point of maximum tidal influence, whichever is less	

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## **APPENDIX D — LIST OF REPORTABLE QUANTITIES FOR HAZARDOUS SUBSTANCE RELEASES**

### **Note**

**This section contains an up-to-date list of the EPA reportable quantities for hazardous substances. A list, current as of March 10, 1994, is provided here to be used as a starting point. All updates that EPA publishes should be included in this section as amendments to the RQ list.**

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REVISED: March 10, 1994

Hazardous Substances and Reportable Quantities (Note: All Comments/Notes Are at the End of This Table)							
Hazardous Substance	CASRN	Regulatory Synonyms	Statutory			Final RQ	
			RQ	Code	RCRA Waste Number	Category	Pounds (Kg)
Acenaphthene	83329		1*	2		B	100 (45.4)
Acenaphthylene	208968		1*	2		D	5,000 (2,270)
Acetaldehyde	75070	Ethanal	1,000	1,4	U001	C	1,000 (454)
Acetaldehyde, chloro-	107200	Chloroacetaldehyde	1*	4	P023	C	1,000 (454)
Acetaldehyde, trichloro-	75876	Chloral	1*	4	U034	D	5,000 (2,270)
Acetamide, N-(aminothioxomethyl)-	591082	1-Acetyl-2-thiourea	1*	4	P002	C	1,000 (454)
Acetamide, N-(4-ethoxyphenyl)-	62442	Phenacetin	1*	4	U187	B	100 (45.4)
Acetamide, 2-fluoro-	640197	Fluoroacetamide	1*	4	P057	B	100 (45.4)
Acetamide, N-9H-fluoren-2-yl-	53963	2-Acetylaminofluorene	1*	4	U005	X	1 (0.454)
Acetic Acid	64197		1,000	1		D	5,000 (2,270)
Acetic Acid (2,4-dichlorophenoxy)-	94757	2,4-D Acid	100	1,4	U240	B	100 (45.4)
		2,4-D, salts and esters					
Acetic acid, lead(2+) salt	301042	Lead acetate	5,000	1,4	U144	A	10 (4.54)
Acetic acid, thallium(1+) salt	563688	Thallium(I) acetate	1*	4	U214	B	100 (45.4)
Acetic acid, (2,4,5-trichlorophenoxy)-	93765	2,4,5-T	100	1,4	U232	C	1,000 (454)
		2,4,5-T acid					
Acetic acid, ethyl ester	141786	Ethyl acetate	1*	4	U112	D	5,000 (2,270)
Acetic acid, fluoro-, sodium salt	62748	Fluoroacetic acid, sodium salt	1*	4	P058	A	10 (4.54)
Acetic anhydride	108247		1,000	1		D	5,000 (2,270)
Acetone	67641	2-Propanone	1*	4	U002	D	5,000 (2,270)
Acetone cyanohydrin	75865	Propanenitrile, 2-hydroxy-2-methyl- 2-Methylactonitrile	10	1,4	P069	A	10 (4.54)
Acetonitrile	75058		1*	4	U003	D	5,000 (2,270)
Acetophenone	98862	Ethanone, 1-phenyl-	1*	4	U004	D	5,000 (2,270)
2-Acetylaminofluorene	53963	Acetamide, N-9H-fluoren-2-yl-	1*	4	U005	X	1 (0.454)
Acetyl bromide	506967		5,000	1		D	5,000 (2,270)
Acetyl chloride	75365		5,000	1,4	U006	D	5,000 (2,270)
1-Acetyl-2-thiourea	591082	Acetamide, N-(aminothioxomethyl)-	1*	4	P002	C	1,000 (454)
Acrolein	107028	2-Propenal	1	1,2,4	P003	X	1 (0.454)
Acrylamide	79061	2-Propenamide	1*	4	U007	D	5,000 (2,270)
Acrylic acid	79107	2-Propenoic acid	1*	4	U008	D	5,000 (2,270)
Acrylonitrile	107131	2-Propenenitrile	100	1,2,4	U009	B	100 (45.4)
Adipic acid	124049		5,000	1		D	5,000 (2,270)
Aldicarb	116063	Propanal, 2-methyl-2-(methylthio)-, O- [(methylamino)carbonyl]oxime	1*	4	P070	X	1 (0.454)

Hazardous Substances and Reportable Quantities (Note: All Comments/Notes Are at the End of This Table)							
Hazardous Substance	CASRN	Regulatory Synonyms	Statutory			Final RQ	
			RQ	Code	RCRA Waste Number	Category	Pounds (Kg)
Aldrin	309002	1,4,5,8-Dimethanonaphthalene, 1,2,3,4,10,10-10- hexachloro-1,4,4a,5,8,8a- hexahydro-a, (1alpha,4alpha,4abeta, 5alpha,8alpha,8abeta- 2-Propen-1-ol	1	1.24	P004	X	1 (0.454)
Allyl alcohol	107186		100	1,4	P005	B	100 (45.4)
Allyl chloride	107051		1,000	1		C	1,000 (454)
Aluminum phosphide	20859738		1 *	4	P006	B	100 (45.4)
Aluminum sulfate	10043013		5,000	1		D	5,000 (2,270)
5-(Aminomethyl)-3-isoxazolol	2763964		1 *	4	P007	C	1,000 (454)
4-Aminopyridine	504245	Muscimol 3(2H)-isoxazolone, 5- (amino-methyl)-	1 *	4	P008	C	1,000 (454)
Amitrole	61825	4-Pyridinamine	1 *	4	U011	A	10 (4.54)
Ammonia	7664417	1H-1,2,4-Triazol-3-amine	100	1		B	100 (45.4)
Ammonium acetate	631618		5,000	1		D	5,000 (2,270)
Ammonium benzoate	1863634		5,000	1		D	5,000 (2,270)
Ammonium bicarbonate	1066337		5,000	1		D	5,000 (2,270)
Ammonium bichromate	7789095		1,000	1		A	10 (4.54)
Ammonium bifluoride	1341497		5,000	1		B	100 (45.4)
Ammonium bisulfite	10192300		5,000	1		D	5,000 (2,270)
Ammonium carbamate	1111780		5,000	1		D	5,000 (2,270)
Ammonium carbonate	506876		5,000	1		D	5,000 (2,270)
Ammonium chloride	12125029		5,000	1		D	5,000 (2,270)
Ammonium chromate	7788989		1,000	1		A	10 (4.54)
Ammonium citrate, dibasic	3012655		5,000	1		D	5,000 (2,270)
Ammonium fluoborate	13826830		5,000	1		D	5,000 (2,270)
Ammonium fluoride	12125018		5,000	1		B	100 (45.4)
Ammonium hydroxide	1336216		1,000	1		C	1,000 (454)
Ammonium oxalate	6009707		5,000	1		D	5,000 (2,270)
	5972736						
	14258492						
Ammonium picrate	131748		1 *	4	P009	A	10 (4.54)
Ammonium silicofluoride	16919190	Phenol,2,4,6-trinitro-,ammonium salt	1,000	1		C	1,000 (454)
Ammonium sulfamate	7773060		5,000	1		D	5,000 (2,270)
Ammonium sulfide	12135761		5,000	1		B	100 (45.4)
Ammonium sulfite	10196040		5,000	1		D	5,000 (2,270)
Ammonium tartrate	14307438		5,000	1		D	5,000 (2,270)
	3164292						
Ammonium thiocyanate	1762954		5,000	1		D	5,000 (2,270)

Hazardous Substances and Reportable Quantities [Note: All Comments/Notes Are at the End of This Table]							
Hazardous Substance	CASRN	Regulatory Synonyms	Statutory			Final RQ	
			RQ	Code	RCRA Waste Number	Category	Pounds (Kg)
Ammonium vanadate	7803556	Vanadic acid, ammonium salt	1*	4	P119	C	1,000 (454)
Amyl acetate	628637		1,000	1		D	5,000 (2,270)
iso-Amyl acetate	123922						
sec-Amyl acetate	626380						
tert-Amyl acetate	625161						
Aniline	62533	Benzenamine	1,000	1,4	U102	D	5,000 (2,270)
Anthracene	120127		1*	2		D	5,000 (2,270)
Antimony††	7440360		1*	2		D	5,000 (2,270)
Antimony and compounds	N.A.		1*	2			**
Antimony pentachloride	7647189		1,000	1		C	1,000 (454)
Antimony potassium tartrate	28300745		1,000	1		B	100 (45.4)
Antimony tribromide	7789619		1,000	1		C	1,000 (454)
Antimony trichloride	10025919		1,000	1		C	1,000 (454)
Antimony trifluoride	7783564		1,000	1		C	1,000 (454)
Antimony trioxide	1309644		5,000	1		C	1,000 (454)
Argentate(1-),bis(cyano-C)-, potassium	506616	Potassium silver cyanide	1*	4	P099	X	1 (0.454)
Aroclor 1016	12674112	POLYCHLORINATED BIPHENYLS	10	1,2		X	1 (0.454)
Aroclor 1221	11104282	(PCBs)	10	1,2		X	1 (0.454)
Aroclor 1232	11141165	POLYCHLORINATED BIPHENYLS	10	1,2		X	1 (0.454)
Aroclor 1242	53469219	(PCBs)	10	1,2		X	1 (0.454)
Aroclor 1248	12672296	POLYCHLORINATED BIPHENYLS	10	1,2		X	1 (0.454)
Aroclor 1254	11097891	(PCBs)	10	1,2		X	1 (0.454)
Aroclor 1260	11096825	POLYCHLORINATED BIPHENYLS	10	1,2		X	1 (0.454)
Arsenic††	7440382	(PCBs)	1*	2,3		X	1 (0.454)
Arsenic acid	1327522	POLYCHLORINATED BIPHENYLS	1*	4	P010	X	1 (0.454)
	7778394	(PCBs)					
Arsenic acid H3AsO4	1327522	POLYCHLORINATED BIPHENYLS	1*	4	P010	X	1 (0.454)
	7778394	(PCBs)					
Arsenic and compounds	N.A.	POLYCHLORINATED BIPHENYLS	1*	2			**
Arsenic disulfide	1303328	(PCBs)	5,000	1		X	1 (0.454)
Arsenic oxide As2O3	1327533		5,000	1,4	P012	X	1 (0.454)
Arsenic oxide As2O5	1303282	Arsenic acid H3AsO4	5,000	1,4	P011	X	1 (0.454)
Arsenic pentoxide	1303282		5,000	1,4	P011	X	1 (0.454)
Arsenic trichloride	7784341	Arsenic acid	5,000	1		X	1 (0.454)
Arsenic trioxide	1327533		5,000	1,4	P012	X	1 (0.454)
Arsenic trisulfide	1303339		5,000	1		X	1 (0.454)
Arsine, diethyl-	692422		1*	4	P038	X	1 (0.454)
Arsinic acid, dimethyl	75605	Arsenic trioxide	1*	4	U136	X	1 (0.454)
Arsonous dichloride, phenyl-	696286	Arsenic pentoxide	1*	4	P036	X	1 (0.454)
Asbestos†††	1332214	Arsenic oxide As2O5	1*	2,3		X	1 (0.454)
		Arsenic oxide As2O3					

Hazardous Substances and Reportable Quantities (Note: All Comments/Notes Are at the End of This Table)							
Hazardous Substance	CASRN	Regulatory Synonyms	Statutory			Final RQ	
			RQ	Code	RCRA Waste Number	Category	Pounds (Kg)
Auramine	492808	Benzenamine, 4,4'-carbonimidoylbis (N,N-dimethyl-	1*	4	U014	B	100 (45.4)
Azaserine	115026	L-Serine, diazoacetate (ester)	1*	4	U015	X	1 (0.454)
Aziridine	151564	Ethylenimine	1*	4	P054	X	1 (0.454)
Aziridine, 2-methyl-	75558	1,2-Propylenimine	1*	4	P067	X	1 (0.454)
Azirino[2',3':3,4]pyrrolo [1,2-a]indole-4,7-dione,6-amino-8-[(amino-carbonyloxy)-1,1a.2.8.8a.8b-hexahydro-8a-meth-oxy-5-methyl-, [1aS-(1aalpha,8beta,8aalpha,8balph)]-	50077	Mitomycin C	1*	4	U010	A	10 (4.54)
Barium cyanide	542621		10	1,4	P013	A	10 (4.54)
Benz [i]aceanthrylene,1,2-dihydro-3-methyl-	56495	3-Methylchloanthrene	1*	4	U157	A	10 (4.54)
Benz[c]acridine	225514		1*	4	U016	B	100 (45.4)
Benzal chloride	98873	Benzene, dichloromethyl-	1*	4	U017	D	5,000 (2,270)
Benzamide, 3,5-dichloro-N-(1,1-dimethyl-2-propynyl	23950585	Pronamide	1*	4	U192	D	5,000 (2,270)
Benz[a]anthracene	56553	Benzo [a]anthracene	1*	2,4	U018	A	10 (4.54)
1,2-Benzanthracene	56553	1,2-Benzanthracene	1*	2,4	U018	A	10 (4.54)
Benz[a]anthracene,7,12-dimethyl-	57976	Benz[a]anthracene	1*	4	U094	X	1 (0.454)
Benzenamine	62533	7,12-Dimethylbenz [a]anthracene	1,000	1,4	U012	D	5,000 (2,270)
Benzenamine, 4,4'-carbonimidoylbis (N,N-dimethyl-	492808	Aniline	1*	4	U014	B	100 (45.4)
Benzenamine, 4-chloro-	106478	Auramine	1*	4			
Benzenamine, 4-chloro-2-methyl-, hydrochloride	3165933	p-Chloroaniline	1*	4	P024	C	1,000 (454)
Benzenamine, N,N-dimethyl-4-(phenylazo-)	60117	4-Chloro-o-toluidine, hydrochloride	1*	4	U049	B	100 (45.4)
Benzenamine, 2-methyl-	95534	p-Dimethylaminoazobenzene	1*	4	U093	A	10 (4.54)
Benzenamine, 4-methyl-	106490	o-Toluidine	1*	4	U328	B	100 (45.4)
Benzenamine, 4,4'-methylenebis(2-chloro-	101144	p-Toluidine	1*	4	U353	B	100 (45.4)
Benzenamine, 2 methyl-, hydrochloride	636215	4,4,'-Methylenebis(2-chloroaniline)	1*	4	U158	A	10 (4.54)
Benzenamine, 2-methyl-5-nitro-	99558	o-Toluidine hydrochloride	1*	4	U222	B	100 (45.4)
Benzenamine, 4-nitro-	100016	5-Nitro-o-toluidine	1*	4	U181	B	100 (45.4)
Benzene	71432	p-Nitroaniline	1*	4	P077	D	5,000 (2,270)
chlorophenyl)-alpha-hydroxy-, ethyl ester			1,000	1,2,3,4	U109	A	10 (4.54)

Hazardous Substances and Reportable Quantities (Note: All Comments/Notes Are at the End of This Table)							
Hazardous Substance	CASRN	Regulatory Synonyms	Statutory			Final RQ	
			RQ	Code	RCRA Waste Number	Category	Pounds (Kg)
Benzeneacetic acid, 4-chloro-alpha-(4-chlorophenyl)-alpha-hydroxy-, ethyl ester	510156	Chlorobenzilate	1*	4	U038	A	10 (4.54)
Benzene, 1-bromo-4-phenoxy-	101553	4-Bromophenyl phenyl ether	1*	2,4	U030	B	100 (45.4)
Benzenebutanoic acid, 4- [bis(2-chloroethyl) amino]-	305033	Chlorambucil	1*	4	U035	A	10 (4.54)
Benzene, chloro-	108907	Chlorobenzene	100	1,2,4	U037	B	100 (45.4)
Benzene, chloromethyl-	100447	Benzyl Chloride	100	1,4	P028	B	100 (45.4)
Benzenediamin, ar-methyl-	95807	Toluenediamine	1*	4	U221	A	10 (4.54)
	496720						
	823405						
1,2-Benzenedicarboxylic acid, dioctyl ester	117840	Di-n-octyl phthalate	1*	2,4	U107	D	5,000 (2,270)
1,2-Benzenedicarboxylic acid, [bis(2-ethylhexyl)]-ester	117817	Bis (2-ethylhexyl)phthalate	1*	2,4	U028	B	100 (45.4)
		Diethylhexyl phthalate					
1,2-Benzenedicarboxylic acid, dibutyl ester	84742	Di-n-butyl phthalate	100	1,2,4	U069	A	10 (4.54)
		Dibutyl phthalate					
1,2-Benzenedicarboxylic acid, diethyl ester	84662	n-Butyl phthalate	1*	2,4	U088	C	1,000 (454)
		Diethyl phthalate					
1,2-Benzenedicarboxylic acid, dimethyl ester	131113	Dimethyl phthalate	1*	2,4	U102	D	5,000 (2,270)
Benzene, 1,2-dichloro-	95501	o-Dichlorobenzene	100	1,2,4	U070	B	100 (45.4)
		1,2-Dichlorobenzene					
Benzene, 1,3-dichloro-	541731	m-Dichlorobenzene	1*	2,4	U071	B	100 (45.4)
		1,3-Dichlorobenzene					
Benzene, 1,4-dichloro-	106467	p-Dichlorobenzene	100	1,2,4	U072	B	100 (45.4)
		1,4-Dichlorobenzene					
Benzene, 1,1'-(2,2-dichloroethylidene) bis[4-chloro-	72548	DDD	1*	1,2,4	U060	X	1 (0.454)
		TDE					
		4,4' DDD					
Benzene, dichloromethyl-	98873	Benzal chloride	1*	4	U017	D	5,000 (2,270)
Benzene, 1,3-diisocyanatomethyl-	584849	Toluene diisocyanate	1*	4	U223	B	100 (45.4)
		91087					
		26471625					
Benzene, dimethyl	1330207	Xylene (mixed)	1,000	1,4	U239	C	1,000 (454)
m-Benzene, dimethyl	108383	m-Xylene					
o-Benzene, dimethyl	95476	o-Xylene					

Hazardous Substances and Reportable Quantities (Note: All Comments/Notes Are at the End of This Table)							
Hazardous Substance	CASRN	Regulatory Synonyms	Statutory			Final RQ	
			RQ	Code	RCRA Waste Number	Category	Pounds (Kg)
p-Benzene, dimethyl	106423	p-Xylene					
1,3-Benzenediol	108463	Resorcinol	1,000	1,4	U201	D	5,000 (2,270)
1,2-Benzenediol, 4-(1-hydroxy-2-(methyl-amino)ethyl)	51434	Epinephrine	1*	4	P042	C	1,000 (454)
Benzeneethanamine, alpha, alpha-dimethyl-	122098	alpha, alpha-Dimethylphenethylamine	1*	4	P046	D	5,000 (2,270)
Benzene, hexachloro-	118741	Hexachlorobenzene	1*	2,4	U127	A	10 (4.54)
Benzene, hexahydro-	110827	Cyclohexane	1,000	1,4	U056	C	1,000 (454)
Benzene, hydroxy-	108952	Phenol	1,000	1,2,4	U188	C	1,000 (454)
Benzene, methyl-	108883	Toluene	1,000	1,2,4	U220	C	1,000 (454)
Benzene, 2-methyl-1,3-dinitro-	606202	2,6-Dinitrotoluene	1,000	1,2,4	U106	B	100 (45.4)
Benzene, 1-methyl-2,4-dinitro-	121142	2,4-Dinitrotoluene	1,000	1,2,4	U105	A	10 (4.54)
Benzene, 1-methylethyl-	98828	Cumene	1*	4	U055	D	5,000 (2,270)
Benzene, nitro-	98953	Nitrobenzene	1,000	1,2,4	U169	C	1,000 (454)
Benzene, pentachloro-	608935	Pentachlorobenzene	1*	4	U183	A	10 (4.54)
Benzene, pentachloronitro-	82688	Pentachloronitrobenzene (PCNB)	1*	4	U185	B	100 (45.4)
Benzenesulfonic acid chloride	98099	Benzenesulfonyl chloride	1*	4	U020	B	100 (45.4)
Benzenesulfonyl chloride	98099	Benzenesulfonic acid chloride	1*	4	U020	B	100 (45.4)
Benzene, 1,2,4,5-tetrachloro-	95943	1,2,4,5-Tetrachlorobenzene	1*	4	U207	D	5,000 (2,270)
Benzenethiol	108985	Thiophenol	1*	4	P014	B	100 (45.4)
Benzene, 1,1'-(2,2,2-trichloroethylidene)bis [4-chloro-	50293	DDT	1	1,2,4	U061	X	1 (0.454)
Benzene, 1,1'-(2,2,2-trichloroethylidene) bis [4-methoxy-	72435	4,4'DDT Methoxychlor	1	1,4	U247	X	1 (0.454)
Benzene, (trichloromethyl)-	98077	Benzotrichloride	1*	4	U023	A	10 (4.54)
Benzene, 1,3,5-trinitro-	99354	1,3,5-Trinitrobenzene	1*	4	U234	A	10 (4.54)
Benidine	92875	(1,1'-Biphenyl)-4,4'diamine	1*	2,4	U021	X	1 (0.454)
1,2-Benzisothiazol-3(2H)-one, 1,1-dioxide	81072	Saccharin and salts	1*	4	U202	B	100 (45.4)
Benzo[a]anthracene	56553	Benz[a]anthracene 1,2-Benzanthracene	1*	2,4	U018	A	10 (4.54)
Benzo[b]fluoranthene	205992		1*	2		X	1 (0.454)
Benzo[k]fluoranthene	207089		1*	2		D	5,000 (2,270)
Benzo[j,k]fluorene	206440	Fluoranthene	1*	2,4	U120	B	100 (45.4)
1,3-Benzodioxole, 5-(1-propenyl)-	120581	Isosafrole	1*	4	U141	B	100 (45.4)
1,3-Benzodioxole, 5-(2-propenyl)-	94597	Safrole	1*	4	U203	B	100 (45.4)
1,3-Benzodioxole, 5-propyl-	94586	Dihydrosafrole	1*	4	U090	A	10 (4.54)
Benzoic acid	65860		5,000	1		D	5,000 (2,270)
Benzonitrile	100470		1,000	1		D	5,000 (2,270)
Benzo [rst]pentaphene	189559	Dibenz[a,i]pyrene	1*	4	U064	A	10 (4.54)
Benzo[ghi]perylene	191242		1*	2		D	5000 (2270)

Hazardous Substances and Reportable Quantities (Note: All Comments/Notes Are at the End of This Table)							
Hazardous Substance	CASRN	Regulatory Synonyms	Statutory			Final RQ	
			RQ	Code	RCRA Waste Number	Category	Pounds (Kg)
2H-1-Benzopyran-2-one, 4-hydroxy-3-(3-oxo-1-phenyl-butyl)-, & salts, when present at concentrations greater than 0.3%	81812	Warfarin, & salts, when present at concentrations greater than 0.3%	1*	4	P001	B	100 (4.54)
Benzo[a]pyrene							
3,4-Benzopyrene	50328	3,4-Benzopyrene	1*	2,4	U022	X	1 (0.454)
p-Benzoquinone	50328	Benzo[a]pyrene	1*	2,4	U022	X	1 (0.454)
Benzotrichloride	106514	2,5-Cyclohexadiene-1,4-dione	1*	4	U197	A	10 (4.54)
Benzoyl chloride	98077	Benzene, (trichloromethyl)-	1*	4	U023	A	10 (4.54)
1,2-Benzphenanthrene	98884		1,000	1		C	1,000 (454)
Benzyl chloride	218019	Chrysene	1*	2,4	U050	B	100 (45.4)
Beryllium††	100447	Benzene, chloromethyl-	100	1,4	P028	B	100 (45.4)
Beryllium and compounds	7440417	Beryllium dust††	1*	2,3,4	P015	A	10 (4.54)
Beryllium chloride	N.A.		1*	2			**
Beryllium dust††	7787475		5,000	1		X	1 (0.454)
Beryllium fluoride	7440417	Beryllium††	1*	2,3,4	P015	A	10 (4.54)
Beryllium nitrate	7787497		5,000	1		X	1 (0.454)
	13597994		5,000	1		X	1 (0.454)
alpha-BHC		7787555					
beta-BHC	319846		1*	2		A	10 (4.54)
delta-BHC	319857		1*	2		X	1 (0.454)
gamma-BHC	319868		1*	2		X	1 (0.454)
	58899	Cyclohexane, 1,2,3,4,5,6-hexachloro-, (1alpha,2alpha,3beta,4alpha,5alpha,6beta)-Hexachlorocyclohexane (gamma isomer) Lindane	1	1,2,4	U129	X	1 (0.454)
2,2'-Bioxirane	1464535	1,2:3,4-Diepoxybutane	1*	4	U085	A	10 (4.54)
(1,1'-Biphenyl)-4,4'-diamine	92875	Benzidine	1*	2,4	U021	X	1 (0.454)
[1,1'-Biphenyl]-4,4'-diamine, 3,3'-dichloro-	91941	3,3'-Dichlorobenzidine	1*	2,4	U073	X	1 (0.454)
[1,1'-Biphenyl]-4,4'-diamine, 3,3'-dimethoxy-	119904	3,3'-Dimethoxybenzidine	1*	4	U091	B	100 (45.4)
[1,1'-Biphenyl]-4,4'-diamine, 3,3'-dimethyl-	119937	3,3'-Dimethylbenzidine	1*	4	U095	A	10 (4.54)
Bis (2-chloroethyl) ether	111444	Dichloroethyl ether	1*	2,4	U025	A	10 (4.54)
		Ethane, 1,1'-oxybis[2-chloro-					
Bis(2-chloroethoxy) methane	111911	Dichloromethoxy ethane	1*	2,4	U024	C	1,000 (454)
		Ethane, 1,1'-[methylenebis(oxy)]bis(2-chloro-					
Bis (2-ethylhexyl)phthalate	117817	Diethylhexyl phthalate	1*	2,4	U028	B	100 (45.4)
		1,2-Benzenedicarboxylic acid, [bis(2-ethylhexyl)] ester					
Bromoacetone	598312	2-Propanone, 1-bromo-	1*		P017	C	1,000 (454)

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Hazardous Substance	CASRN	Regulatory Synonyms	Statutory			Final RQ	
			RQ	Code	RCRA Waste Number	Category	Pounds (Kg)
Bromoform	75252	Methane, tribromo-	1*	2,4	U225	B	100 (45.4)
4-Bromophenyl phenyl ether	101553	Benzene, 1-bromo-4-phenoxy-	1*	2,4	U030	B	100 (45.4)
Brucine	357573	Strychnidin-10-one,2,3-dimethoxy-	1*	4	P018	B	100 (45.4)
1,3-Butadiene, 1,1,2,3,4,4-hexachloro-	87683	Hexachlorobutadiene	1*	2,4	U128	X	1 (0.454)
1-Butanamine, N-butyl-N-nitroso-	924163	N-Nitrosodi-n-butylamine	1*	4	U172	A	10 (4.54)
1-Butanol	71363	n-Butyl alcohol	1*	4	U031	D	5,000 (2,270)
2-Butanone	78933	Methyl ethyl ketone (MEK)	1*	4	U159	D	5,000 (2,270)
2-Butanone peroxide	1338234	Methyl ethyl ketone peroxide	1*	4	U160	A	10 (4.54)
2-Butanone, 3,3-dimethyl-1-(methylthio)-, O[(methylamino)carbonyl] oxime	39196184	Thiofanox		4	P045	B	100 (45.4)
2-Butenal	123739	Crotonaldehyde	100	1,4	U053	B	100 (45.4)
	4170303						
2-Butene, 1,4-dichloro-	764410	1,4-Dichloro-2-butene	1*	4	U074	X	1 (0.454)
2-Butenoic acid, 2-methyl-, 7I [2,3-dihydroxy-2-(1-methoxyethyl)-3-methyl-1-oxobutoxymethyl]-2,3,5,7a-tetrahydro-1H-pyrrolizin-1-yl ester, [1S-[1alpha(Z),7(2S*,3R*),7aalpha]]-	303344	Lasiocarpine	1*	4	U143	A	10 (4.54)
Butyl acetate	123864		5,000	1			
iso-Butyl acetate	110190						
sec-Butyl acetate	105464					D	5,000 (2,270)
tert-Butyl acetate	540885						
n-Butyl alcohol	71363	1-Butanol	1*	4	U031		
Butylamine	109739		1,000	1			
iso-Butylamine	78819					D	5,000 (2,270)
sec-Butylamine	513495					C	1,000 (454)
	13952846						
tert-Butylamine	75649						
Butyl benzyl phthalate	85687		1*	2			
n-Butyl phthalate	84742	Di-n-butyl phthalate	100	1,2,4	U069	B	100 (45.4)
		Dibutyl phthalate				A	10 (4.54)
		1,2-Benzenedicarboxylic acid, dibutyl ester					
Butyric acid	107926		5,000	1			
iso-Butyric acid	79312						5,000 (2,270)
Cacodylic acid	75605						
Cadmium††	7440439	Arsinic acid, dimethyl-	1*	4	U136	D	
Cadmium acetate	543908		100	1		X	1 (0.454)
						A	10 (4.54)
						A	10 (4.54)
Cadmium and compounds	N.A.		1*	2			**

Hazardous Substances and Reportable Quantities [Note: All Comments/Notes Are at the End of This Table]							
Hazardous Substance	CASRN	Regulatory Synonyms	Statutory			Final RQ	
			RQ	Code	RCRA Waste Number	Category	Pounds (Kg)
Cadmium bromide	7789426		100	1		A	10 (4.54)
Cadmium chloride	10108642		100	1		A	10 (4.54)
Calcium arsenate	7778441		1,000	1		X	1 (0.454)
Calcium arsenite	52740166		1,000	1		X	1 (0.454)
Calcium carbide	75207		5,000	1		A	10 (4.54)
Calcium chromate	13765190	Chromic acid H <sub>2</sub> CrO <sub>4</sub> , calcium salt	1,000	1,4	U032	A	10 (4.54)
Calcium cyanide	592018	Calcium cyanide Ca(CN) <sub>2</sub>	10	1,4	P021	A	10 (4.54)
Calcium cyanide Ca(CN) <sub>2</sub>	592018	Calcium cyanide	10	1,4	P021	A	10 (4.54)
Calcium dodecylbenzenesulfonate	26264062		1,000	1		C	1,000 (454)
Calcium hypochlorite	7778543		100	1		A	10 (4.54)
Camphene, octachloro-	8001352	Toxaphene	1	1,2,4	P123	X	1 (0.454)
Captan	133062		10	1		A	10 (4.54)
Carbamic acid, ethyl ester	51796	Ethyl carbamate (urethane)	1*	4	U238	B	100 (45.4)
Carbamic acid, methylnitroso-,ethyl ester	615532	N-Nitroso-N-methylurethane	1*	4	U178	X	1 (0.454)
Carbamic chloride, dimethyl-	79447	Dimethylcarbamoyl chloride	1*	4	U097	X	1 (0.454)
Carbamodithioic acid, 1,2-ethanediybis, salts & esters	111546	Ethylenebis(dithiocarbamic acid, salts & esters)	1*	4	U114	D	5,000 (2,270)
Carbamothioic acid, bis(1-methylethyl)-,S-(2,3-dichloro-2-propenyl) ester	2303164	Diallate	1*	4	U062	B	100 (45.4)
Carbaryl	63252		100	1		B	100 (45.4)
Carbofuran	1563662		10	1		A	10 (4.54)
Carbon disulfide	75150		5,000	1,4	P022	B	100 (45.4)
Carbon oxyfluoride	353504	Carbonic difluoride	1*	4	U033	C	1,000 (454)
Carbon tetrachloride	56235	Methane, tetrachloro-	5,000	1,2,4	U211	A	10 (4.54)
Carbonic acid, dithallium(1+) salt	6533739	Thallium(I) carbonate	1*	4	U215	B	100 (45.4)
Carbonic dichloride	75445	Phosgene	5,000	1,4	P095	A	10 (4.54)
Carbonic difluoride	353504	Carbon oxyfluoride	1*	4	U033	C	1,000 (454)
Carbonochloridic acid, methyl ester	79221	Methyl chlorocarbonate	1*	4	U156	C	1,000 (454)
		Methyl chloroformate					
Chloral	75876	Acetaldehyde, trichloro-	1*	4	U034	D	5,000 (2,270)
Chlorambucil	305033	Benzenebutanoic acid, 4-[bis(2-chloroethyl)amino]-	1*	4	U035	A	10 (4.54)
Chlordane	57749	Chlordane, alpha & gamma isomers Chlordane, technical 4,7-Methano-1H-indene, 1,2,4,5,6,7,8,8-octachloro-2,3,3a,4,7,7a-hexahydro-	1	1,2,4	U036	X	1 (0.454)
Chlordane (technical mixture and Metabolites)	N.A.		1*	2			**

<b>Hazardous Substances and Reportable Quantities</b> [Note: All Comments/Notes Are at the End of This Table]							
Hazardous Substance	CASRN	Regulatory Synonyms	Statutory			Final RQ	
			RQ	Code	RCRA Waste Number	Category	Pounds (Kg)
Chlordane, alpha & gamma isomers	57749	Chlordane Chlordane, technical 4,7-Methano-1H-indene, 1,2,4,5,6, 7,8,8-octachloro-2,3,3a,4,7,7a- hexahydro-	1	1,2,4	U036	X	1 (0.454)
Chlordane, technical	57749	Chlordane Chlordane, alpha & gamma isomers 4,7-Methano-1H-indene, 1,2,4,5,6, 7,8,8-octachloro- 2,3,3a,4,7,7a-hexahydro-	1	1,2,4	U036	X	1 (0.454)
Chlorinated benzenes	N.A.		1*	2			**
Chlorinated ethanes	N.A.		1*	2			**
Chlorinated naphthalene	N.A.		1*	2			**
Chlorinated phenols	N.A.		1*	2			**
Chlorine	7782505		10	1		A	10 (4.54)
Chloronaphazine	494031	Naphthalenamine, N,N'-bis(2- chloroethyl)-	1*	4	U026	B	100 (45.4)
Chloroacetaldehyde	107200	Acetaldehyde, chloro-	1*	4	P023	C	1,000 (454)
Chloroalkyl ethers	N.A.		1*	2			**
p-Chloroaniline	106478	Benzenamine, 4-chloro-	1*	4	P024	C	1,000 (454)
Chlorobenzene	108907	Benzene, chloro-	100	1,2,4	U037	B	100 (45.4)
Chlorobenzilate	510156	Benzeneacetic acid, 4-chloro-alpha- (4-chlorophenyl)-alpha-hydroxy-, ethyl ester	1*	4	U038	A	10 (4.54)
4-Chloro-m-cresol	59507	p-Chloro-m-cresol	1*	2,4	U039	D	5,000 (2,270)
p-Chloro-m-cresol	59507	Phenol, 4-chloro-3-methyl- Phenol, 4-chloro-3-methyl- 4-Chloro-m-cresol	1*	2,4	U039	D	5,000 (2,270)
Chlorodibromomethane	124481		1*	2		B	100 (45.4)
Chloroethane	75003		1*	2		B	100 (45.4)
2-Chloroethyl vinyl ether	110758	Ethene, 2-chloroethoxy-	1*	2,4	U042	C	1,000 (454)
Chloroform	67663	Methane, trichloro-	5,000	1,2,4	U044	A	10 (4.54)
Chloromethyl methyl ether	107302	Methane, chloromethoxy-	1*	4	U046	A	10 (4.54)
beta-Chloronaphthalene	91587	Naphthalene, 2-chloro- 2-Chloronaphthalene	1*	2,4	U047	D	5,000 (2,270)
2-Chloronaphthalene	91587	beta-Chloronaphthalene	1*	2,4	U047	D	5,000 (2,270)
2-Chlorophenol	95578	Naphthalene, 2-chloro- o-Chlorophenol	1*	2,4	U048	B	100 (45.4)
o-Chlorophenol	95578	Phenol, 2-chloro- Phenol, 2-chloro- 2-Chlorophenol	1*	2,4	U048	B	100 (45.4)

Hazardous Substances and Reportable Quantities [Note: All Comments/Notes Are at the End of This Table]							
Hazardous Substance	CASRN	Regulatory Synonyms	Statutory			Final RQ	
			RQ	Code	RCRA Waste Number	Category	Pounds (Kg)
4-Chlorophenyl phenyl ether	7005723		1*	2		D	5,000 (2,270)
1-(o-Chlorophenyl)thiourea	5344821	Thiourea, (2-chlorophenyl)-	1*	4	P026	B	100 (45.4)
3-Chloropropionitrile	542767	Propanenitrile, 3-chloro-	1*	4	P027	C	1,000 (454)
Chlorosulfonic acid	7790945		1,000	1		C	1,000 (454)
4-Chloro-o-toluidine, hydrochloride	3165933	Benzenamine, 4-chloro-2-methyl-, hydro-chloride	1*	4	U049	B	100 (45.4)
Chlorpyrifos	2921882		1	1		X	1 (0.454)
Chromic acetate	1066304		1,000	1		C	1,000 (454)
Chromic acid	11115745		1,000	1		A	10 (4.54)
	7738945						
Chromic acid H2CrO4, calcium salt	13765190	Calcium chromate	1,000	1,4	U032	A	10 (4.54)
Chromic sulfate	10101538		1,000	1		C	1,000 (454)
Chromium††	7440473		1*	2		D	5,000 (2,270)
Chromium and compounds	N.A.		1*	2			
Chromous chloride	10049055		1,000	1		C	1,000 (454)
Chrysene	218019	1,2-Benzphenanthrene	1*	2,4	U050	B	100 (45.4)
Cobaltous bromide	7789437		1,000	1		C	1,000 (454)
Cobaltous formate	544183		1,000	1		C	1,000 (454)
Cobaltous sulfamate	1407415		1,000	1		C	1,000 (454)
Coke Oven Emissions	N.A.		1*	3		X	1 (0.454)
Copper cyanide CuCN	544923	Copper cyanide	1*	4	P029	A	10 (4.54)
Copper††	7440508		1*	2		D	5,000 (2,270)
Copper and compounds	N.A.		1*	2			**
Copper cyanide	544923	Copper cyanide CuCN	1*	4	P029	A	10 (4.54)
Coumaphos	56724		10	1		A	10 (4.54)
Creosote	8001589		1*	4	U051	X	1 (0.454)
Cresol(s)	1319773	Cresylic acid	1,000	1,4	U052	C	1,000 (454)
		Phenol, methyl-					
m-Cresol	108394	m-Cresylic acid					
o-Cresol	95487	o-Cresylic acid					
p-Cresol	106445	p-Cresylic acid					
Cresylic acid	1319773	Cresol(s)	1,000	1,4	U052	C	1,000 (454)
		Phenol, methyl-					
m-Cresol	108394	m-Cresylic acid					
o-Cresol	95487	o-Cresylic acid					
p-Cresol	106445	p-Cresylic acid					
Crotonaldehyde	123739	2-Butenal	100	1,4	U053	B	100 (45.4)
	4170303						
Cumene	98828	Benzene, 1-methylethyl-	1*	4	U055	D	5,000 (2,270)
Cupric acetate	142712		100	1		B	100 (45.4)
Cupric acetoarsenite	12002038		100	1		X	1 (0.454)

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Hazardous Substance	CASRN	Regulatory Synonyms	Statutory			Final RQ	
			RQ	Code	RCRA Waste Number	Category	Pounds (Kg)
Cupric chloride	7447394		10	1		A	10 (4.54)
Cupric nitrate	3251238		100	1		B	100 (45.4)
Cupric oxalate	5893663		100	1		B	100 (45.4)
Cupric sulfate	7758987		10	1		A	10 (4.54)
Cupric sulfate, ammoniated	10380297		100	1		B	100 (45.4)
Cupric tartrate	815827		10	1		B	100 (45.4)
Cyanides	N A.		1*	2			**
Cyanides (soluble salts and complexes) not otherwise specified	57125		1*	4	P030	A	10 (4.54)
Cyanogen	460195	Ethanedinitrile	1*	4	P031	B	100 (45.4)
Cyanogen bromide	506683	Cyanogen bromide (CN)Br	1*	4	U246	C	1,000 (454)
Cyanogen bromide (CN)Br	506683	Cyanogen bromide	1*	4	U246	C	1,000 (454)
Cyanogen chloride	605774	Cyanogen chloride (CN)Cl	10	1,4	P033	A	10 (4.54)
Cyanogen chloride (CN)Cl	506774	Cyanogen chloride	10	1,4	P033	A	10 (4.54)
2,5-Cyclohexadiene-1,4-dione	106514	p-Benzoquinone	1*	4	U197	A	10 (4.54)
Cyclohexane	110827	Benzene, hexahydro-	1,000	1,4	U056	C	1,000 (454)
Cyclohexane, 1,2,3,4,5,6-hexachloro-, (1alpha,2alpha,3beta,4alpha,5alpha,6beta)-	58899	gamma-BHC	1	1,2,4	U129	X	1 (0.454)
		Hexachlorocyclohexane (gamma isomer)					
		Lindane					
Cyclohexanone	108941		1*	4	U057	D	5,000 (2,270)
2-Cyclohexyl-4,6-dinitrophenol	131895	Phenol, 2-cyclohexyl-4,6-dinitro-	1*	4	P034	B	100 (45.4)
1,3-Cyclopentadiene, 1,2,3,4,5,5-hexachloro	77474	Hexachlorocyclopentadiene	1	1,2,4	U130	A	10 (4.54)
Cyclophosphamide	50180	2H-1,3,2-Oxazaphosphorin-2-amine, N,N-bis(2-chloroethyl)tetrahydro-, 2-oxide	1*	4	U058	A	10 (4.54)
2,4-D Acid	94757	Acetic acid (2,4-dichlorophenoxy)-2,4-D salts and esters	100	1,4	U240	B	100 (45.4)
2,4-D Ester	94111		100	1		B	100 (45.4)
	94791						
	94804						
	1320189						
	1928387						
	1928616						
	1929733						
	2971382						
	25168267						
	53467111						

Hazardous Substances and Reportable Quantities (Note: All Comments/Notes Are at the End of This Table)							
Hazardous Substance	CASRN	Regulatory Synonyms	Statutory			Final RQ	
			RQ	Code	RCRA Waste Number	Category	Pounds (Kg)
2,4-d, salts and esters	94757	Acetic acid (2,4-dichlorophenoxy)-2,4-D Acid	100	1,4	U240	B	100 (45.4)
Daunomycin	20830813	5,12-Naphthacenedione, 8-acetyl-10- [3-amino-2,3,6- trideoxy-alpha-L-lyxo-hexo- pyranosyl)oxy]-7,8,9,10- tetra-hydro-6,8,11-trihydroxy-1-methoxy-,(8S-cis)-	1*	4	U059	A	10 (4.54)
DDD	72548	Benzene, 1,1'-(2,2-dichloroethylidene)bis [4-chloro-TDE 4,4' DDD	1	1,2,4	U060	X	1 (0.454)
4,4'DDD	72548	Benzene, 1,1'-(2,2,-dichloroethylidene)bis [4-chloro-DDD TDE	1	1,2,4	U060	X	1 (0.454)
DDE	72559	4,4,'DDE	1*	2		X	1 (0.454)
4,4'DDE	72559	DDE	1*	2		X	1 (0.454)
DDT	50293	Benzene, 1,1'-(2,2,2-trichloroethylidene)bis [4-chloro-4,4' DDT	1	1,2,4	U061	X	1 (0.454)
4,4' DDT	50293	Benzene, 1,1'-(2,2,2-trichloroethylidene)bis [4-chloro-DDT	1	1,2,4	U061	X	1 (0.454)
DDT and Metabolites	N.A.		1*	2			**
Dialate	2303164	Carbamothioic acid, bis(1-methylethyl)-, S-(2,3-dichloro-2-propenyl) ester	1*	4	U062	B	100 (45.4)
Diazinon	333415		1	1		X	1 (0.454)
Dibenz[a,h]anthracene	53703	Dibenzo [a,h]anthracene 1,2:5,6-Dibenzanthracene	1*	2,4	U063	X	1 (0.454)
1,2:5,6-Dibenzanthracene	53703	Dibenzo [a,h]anthracene	1*	2,4	U063	X	1 (0.454)
Dibenzo[a,h]anthracene	53703	Dibenzo [a,h]anthracene 1,2:5,6-Dibenzanthracene	1*	2,4	U063	X	1 (0.454)
Dibenz[a,l]pyrene	189559	Benzo [rst]pentaphene	1*	4	U064	X	10 (4.54)

Hazardous Substances and Reportable Quantities (Note: All Comments/Notes Are at the End of This Table)							
Hazardous Substance	CASRN	Regulatory Synonyms	Statutory			Final RQ	
			RQ	Code	RCRA Waste Number	Category	Pounds (Kg)
1,2-Dibromo-3-chloropropane	96128	Propane, 1,2-dibromo-3-chloro	1*	4	U066	X	1 (0.454)
Dibutyl phthalate	84742	Di-n-butyl phthalate n-Butyl phthalate 1,2-Benzenedicarboxylic acid, dibutyl ester	100	1,2,4	U069	A	10 (4.54)
Di-n-butyl phthalate	84742	Dibutyl phthalate n-Butyl phthalate 1,2-Benzenedicarboxylic acid, dibutyl ester	100	1,2,4	U069	A	10 (4.54)
Dicamba	1918009		1,000	1		C	1,000 (454)
Dichlobenil	1194656		1,000	1		B	100 (45.4)
Dichlone	117806		1	1		X	1 (0.454)
Dichlorobenzene	25321226		100	1		B	100 (45.4)
1,2-Dichlorobenzene	95501	Benzene, 1,2-dichloro- o- Dichlorobenzene	100	1,2,4	U070	B	100 (45.4)
1,3-Dichlorobenzene	541731	Benzene, 1,3-dichloro m- Dichlorobenzene	1*	2,4	U071	B	100 (45.4)
1,4-Dichlorobenzene	106467	Benzene, 1,4-dichloro p- Dichlorobenzene	100	1,2,4	U072	B	100 (45.4)
m-Dichlorobenzene	541731	Benzene, 1,3-dichloro 1,3- Dichlorobenzene	1*	2,4	U071	B	100 (45.4)
o-Dichlorobenzene	95501	Benzene, 1,2-dichloro 1,2- Dichlorobenzene	100	1,2,4	U070	B	100 (45.4)
p-Dichlorobenzene	106467	Benzene, 1,4-dichloro 1,4- Dichlorobenzene	100	1,2,4	U072	B	100 (45.4)
Dichlorobenzidine	N.A.		1*	2			**
3,3'-Dichlorobenzidine	91941	[1,1'-Biphenyl]- 4,4'-diamine, 3,3'-dichloro-	1*	2,4	U073	X	1 (0.454)
Dichlorobromomethane	75274		1*	2		D	5,000 (2,270)
1,4-Dichloro-2-butene	764410	2-Butene, 1,4-dichloro-	1*	4	U074	X	1 (0.454)
Dichlorodifluoromethane	75718	Methane, dichlorodifluoro-	1*	4	U075	D	5,000 (2,270)
1,1-Dichloroethane	75343	Ethane, 1,1-dichloro- Ethylidene dichloride	1*	2,4	U076	C	1,000 (454)
1,2-Dichloroethane	107062	Ethane, 1,2-dichloro- Ethylene dichloride	5,000	1,2,4	U077	B	100 (45.4)
1,1-Dichloroethylene	75354	Ethene, 1,1-dichloro- Vinylidene chloride	5,000	1,2,4	U078	B	100 (45.4)
1,2-Dichloroethylene	156605	Ethene, 1,2-dichloro- (E)	1*	2,4	U079	C	1,000 (454)
Dichloroethyl ether	111444	Bis (2-chloroethoxy) methane Ethane, 1,1'- [methylenebis(oxy)]bis (2-chloro-	1*	2,4	U025	A	10 (4.54)

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Hazardous Substance	CASRN	Regulatory Synonyms	Statutory			Final RQ	
			RQ	Code	RCRA Waste Number	Category	Pounds (Kg)
Dichloroisopropyl ether	108601	Propane, 2,2'-oxybis [2-chloro-	1*	2,4	U027	C	1,000 (454)
Dichloromethoxy ethane	111911	Bis(2-chloroethoxy) methane	1*	2,4	U024	C	1,000 (454)
		Ethane, 1,1'-(methylenebis(oxy))					
		bis(2-chloro-					
Dichloromethyl ether	542881	Methane, oxybis(chloro-	1*	4	P016	A	10 (4.54)
2,4-Dichlorophenol	120832	Phenol, 2,4-dichloro-	1*	2,4	U081	B	100 (45.4)
2,6-Dichlorophenol	87650	Phenol, 2,6-dichloro-	1*	4	U082	B	100 (45.4)
Dichlorophenylarsine	696286	Arsinous dichloride, phenyl-	1*	4	P036	X	1 (0.454)
Dichloropropane	26638197		5,000	1		C	1,000 (454)
1,1-Dichloropropane	78999						
1,3-Dichloropropane	142289						
1,2-Dichloropropane	78875	Propane, 1,2-dichloro-	5,000	1,2,4	U083	C	1,000 (454)
		Propylene dichloride					
Dichloropropane-Dichloropropene (mixture)	8003198		5,000	1		B	100 (45.4)
Dichloropropene	26952238		5,000	1		B	100 (45.4)
2,3-Dichloropropene	78886						
1,3-Dichloropropene	542756	1-Propene, 1,3-dichloro-	5,000	1,2,4	U084	B	100 (45.4)
2,2-Dichloropropionic acid	75990		5,000	1		D	5,000 (2,270)
Dichlorvos	62737		10	1		A	10 (4.54)
Dicofol	115322		5,000	1		A	10 (4.54)
Dieldrin	60571	2,7:3,6-Dimethanonaphth [2,3-	1	1,2,4	P037	X	1 (0.454)
		bioxirene,3,4,5,6,9,9-					
		hexachloro-					
		1a,2,2a,3,6,6a,7,7a-					
		octahydro-, (1aalpha,					
		2beta,2aalpha,3beta,6beta,					
		6aalpha,7beta,7aalpha)-					
1,2:3,4-Diepoxybutane	1464535	2,2'Bioxirane	1*	4	U085	A	10 (4.54)
Diethylamine	109897		1,000	1		B	100 (454.4)
Diethylarsine	692422	Arsine, diethyl-	1*	4	P038	X	1 (0.454)
1,4-Diethylenedioxiide	123911	1,4-Dioxane	1*	4	U108	B	100 (45.4)
Diethylhexyl phthalate	117817	Bis (2-ethylhexyl)phthalate	1*	2,4	U028	B	100 (45.4)
		1,2-Benzenedicarboxylic acid, [bis(2-					
		ethylhexyl)] ester					
N,N'-Diethylhydrazine	1615801	Hydrazine, 1,2-diethyl-	1*	4	U086	A	10 (4.54)
O,O-Diethyl S-methyl dithiophosphate	3288582	Phosphorodithioic acid, O,O-diethyl	1*	4	U087	D	5,000 (2,270)
		S-methyl ester					
Diethyl-p-nitrophenyl phosphate	311455	Phosphoric acid, diethyl 4-	1*	4	P041	B	100 (45.4)
		nitrophenyl ester					
Diethyl phthalate	84662	1,2-Benzenedicarboxylic acid, diethyl	1*		U088	C	1,000 (454)
		ester		2,4			

Hazardous Substances and Reportable Quantities (Note: All Comments/Notes Are at the End of This Table)							
Hazardous Substance	CASRN	Regulatory Synonyms	Statutory			Final RQ	
			RQ	Code	RCRA Waste Number	Category	Pounds (Kg)
O,O-Diethyl O-pyrazinyl phosphorothioate	297972	Phosphorothioic acid, O,O-diethyl O-pyrazinyl ester	1*	4	P040	B	100 (45.4)
Diethylstilbestrol	56531	Phenol, 4,4'-(1,2-diethyl-1,2-ethenediyl)bis-, (E)	1*	4	P089	X	1 (0.454)
Dihydrosafrole	94586	1,3-Benzodioxole, 5-propyl-	1*	4	U090	A	10 (4.54)
Diisopropylfluorophosphate	55914	Phosphorofluoric acid, bis(1-methylethyl) ester	1*	4	P043	B	100 (45.4)
1,4,5,8-Dimethanonaphthalene, 1,2,3,4,10,10-hexachloro-1,4,4a,5,8,8a-hexahydro-, (1alpha,4aalpha,4abeta,5alpha,8alpha,8abeta)-	309002	Aldrin	1	1,2,4	P004	X	1 (0.454)
1,4,5,8-Dimethanonaphthalene, 1,2,3,4,10,10-hexachloro-1,4,4a,5,8,8a-hexahydro-, (1alpha,4aalpha,4abeta,5abeta,8beta,8abeta)-	465736	Isodrin	1*	4	P060	X	1 (0.454)
2,7:3,6-Dimethanonaphth [2,3-b]oxirene, 3,4,5,6,9,9-hexachloro-1a,2,2a,3,6,6a,7,6a-octahydro-, (1aalpha,2beta, 2aalpha,3beta,6beta,6aalpha,7beta,7aalpha)-	60571	Dieldrin	1	1,2,4	P037	X	1 (0.454)
2,7:3,6-Dimethanonaphth [2,3-b]oxirene, 3,4,5,6,9,9-hexachloro-1a,2,2a,3,6,6a,7,7a-octahydro-, (aalpha,2beta, 2abeta,3alpha,6alpha,6abeta,7beta,7aalpha)-	72208	Endrin Endrin, & metabolites	1	1,2,4	P051	X	1 (0.454)
Dimethanone, 2,7:3,6-bis(2-oxoethyl)-	60515	Phosphorodithioic acid, O-O-dimethyl S-[2(methylamino)-2-oxoethyl] ester	1*	4	P044	A	10 (4.54)
3,3'-Dimethoxybenzidine	119904	[1,1'-Biphenyl]-4,4'-diamine, 3,3'-dimethoxy-	1*	4	U091	B	100 (45.4)
Dimethylamine	124403	Methanamine, N-methyl-	1,000	1,4	U092	C	1,000 (454)
p-Dimethylaminoazobenzene	60117	Benzenamine, N,N-dimethyl-4-(phenylazo)-	1*	4	U093	A	10 (4.54)
7,12-Dimethylbenz[a]anthracene	57976	Benz[a]anthracene, 7,12-dimethyl-	1*	4	U094	X	1 (0.454)
3,3'-Dimethylbenzidine	119937	[1,1'-Biphenyl]-4,4'-diamine, 3,3'-dimethyl-	1*	4	U095	A	10 (4.54)
alpha,alpha-Dimethylbenzylhydroperoxide	80159	Hydroperoxide, 1-methyl-1-phenylethyl-	1*	4	U096	A	10 (4.54)
Dimethylcarbamoyl chloride	79447	Carbamic chloride, dimethyl-	1*	4	U097	X	1 (0.454)
1,1-Dimethylhydrazine	57147	Hydrazine, 1,1-dimethyl-	1*			A	10 (4.54)
1,2-Dimethylhydrazine	540738						

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			RQ	Code	RCRA Waste Number	Category	Pounds (Kg)
1,2-Dimethylhydrazine	540738	Hydrazine, 1,2-dimethyl-	1*	4	U099	X	1 (0.454)
alpha,alpha-Dimethylphenethylamine	122098	Benzeneethanamine, alpha,alpha-dimethyl	1*	4	P046	D	5,000 (2,270)
2,4-Dimethylphenol	105679	Phenol, 2,4-dimethyl-	1*	2,4	U101	B	100 (45.4)
Dimethyl phthalate	131113	1,2-Benzenedicarboxylic acid, dimethyl ester	1*	2,4	U102	D	5,000 (2,270)
Dimethyl sulfate	77781	Sulfuric acid, dimethyl ester	1*	4	U103	B	100 (45.4)
Dinitrobenzene (mixed)	25154545		1,000	1		B	100 (45.4)
m-Dinitrobenzene	99650						
o-Dinitrobenzene	528290						
p-Dinitrobenzene	100254						
4,6-Dinitro-o-cresol and salts	534521	Phenol,2-methyl-4,6-dinitro-	1*	2,4	P047	A	10 (4.54)
Dinitrophenol	25550587		1,000	1		A	10 (4.54)
2,5-Dinitrophenol	329715						
2,6-Dinitrophenol	573568						
2,4-Dinitrophenol	51285	Phenol, 2,4-dinitro-	1,000	1,2,4	P048	A	10 (4.54)
Dinitrotoluene	25321146		1,000	1,2		A	10 (4.54)
3,4-Dinitrotoluene	610399						
2,4-Dinitrotoluene	121142	Benzene, 1-methyl-2,4-dinitro-	1,000	1,2,4	U105	A	10 (4.54)
2,6-Dinitrotoluene	606202	Benzene, 2-methyl-1,3-dinitro-	1,000	1,2,4	U106	B	100 (45.4)
Dinoseb	88857	Phenol,2-(1-methylpropyl)-4,6-dinitro	1*	4	P020	C	1,000 (454)
Di-n-octyl phthalate	117840	1,2-Benzenedicarboxylic acid, dioctyl ester	1*	2,4	U107	D	5,000 (2,270)
1,4-Dioxane	123911	1,4-Diethylenedioxide	1*	4	U108	B	100 (45.4)
Diphenylhydrazine	N.A.		1*	2			**
1,2-Diphenylhydrazine	122667	Hydrazine, 1,2-diphenyl-	1*	2,4	U109	A	10 (4.54)
Diphosphoramidate, octamethyl-	152169	Octamethylpyrophosphoramidate	1*	4	P085	B	100 (45.5)
Diphosphoric acid, tetraethyl ester	107493	Tetraethyl pyrophosphate	100	1,4	P111	A	10 (4.54)
Dipropylamine	142847	1-Propanamine, N-propyl-	1*	4	U110	D	5,000 (2,270)
Di-n-propylnitrosamine	621647	1-Propanamine, N-Nitroso-N-propyl-	1*	2,4	U111	A	10 (4.54)
Diquat	85007		1,000	1		C	1,000 (454)
	2764729						
Disulfoton	298044	Phosphorodithioic acid, o,o-diethyl S-[2-(ethylthio) ethyl]ester	1	1,4	P039	X	1 (0.454)
		Thioimidodicarbonic diamide					
Dithiobiuret	541537	[(H2N)C(S)]2NH	1*	4	P049	B	100 (45.4)
Diuron	330541		100	1		B	100 (45.4)
Dodecylbenzenesulfonic acid	27176870						

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			RQ	Code	RCRA Waste Number	Category	Pounds (Kg)
Endosulfan	115297	6,9-Methano-2,4,3-benzodioxathiepin, 6,7,8,9,10,10-hexachloro-1,5,5a,6,9, 9a-hexahydro-, 3-oxide	1	1,2,4	P050	X	1 (0.454)
alpha - Endosulfan	959988		1*	2		X	1 (0.454)
beta - Endosulfan	33213659		1*	2		X	1 (0.454)
Endosulfan and Metabolites	N.A.		1*	2			**
Endosulfan sulfate	1031078		1*	2		X	1 (0.454)
Endothall	145733	7-Oxabicyclo [2.2.1]heptane-2,3-dicarboxylic acid	1*	4	O088	C	1,000 (454)
Endrin	72208	Endrin, & metabolites 2,7:3,6-Dimethanonaphth [2,3-b]oxirene,3,4,5,6,9,9-hexachloro-1a,2,2a,3,6,6a,7,7a-octa-hydro-, (1aalpha, 2beta,2abeta,3alpha,6alpha,6abeta, 7beta,7aalpha)-	1	1,2,4	P051	X	1 (0.454)
Epichlorohydrin	106898	Oxirane, (chloromethyl)-	1,000	1,4	U041	B	100 (45.4)
Epinephrine	51434	1,2-Benzenediol,4- [1-hydroxy-2-(methyl-amino)ethyl]-	1*	4	P042	C	1,000 (454)
Ethanal	75070	Acetaldehyde	1,000	1,4	U001	C	1,000 (454)
Ethanamine, N-ethyl-N-nitroso-	55185	N-Nitrosodiethylamine	1*	4	U174	X	1 (0.454)
1,2-Ethanediamine, N,N-dimethyl-N'-2-pyridinyl-N'-(2-thienylmethyl)-	91805	Methapyrilene	1*	4	U155	D	5,000 (2,270)
Ethane, 1,2-dibromo-	106934	Ethylene dibromide	1,000	1,4	U067	X	1 (0.454)
Ethane, 1,1-dichloro-	75343	Ethylidene dichloride 1,1-Dichloroethane	1*	2,4	U076	C	1,000 (454)
Ethane, 1,2-dichloro-	107062	Ethylene dichloride 1,2-Dichloroethane	5,000	1,2,4	U077	B	100 (45.4)
Ethanedinitrile	460195	Cyanogen	1*	4	P031	B	100 (45.4)
Ethane, hexachloro-	67721	Hexachloroethane	1*	2,4	U131	B	100 (45.4)
Ethane, 1,1'- [methylenebis(oxy)]bis(2-chloro-	111911	Bis(2-chloroethoxy) methane	1*	2,4	U024	C	1,000 (45.4)
Ethane, 1,1'-oxybis-	60297	Dichloromethoxy ethane Ethyl ether	1*	4	U117	B	100 (45.4)
Ethane, 1,1'-oxybis [2-chloro-	111444	Bis (2-chloroethyl) ether Dichloroethyl ether	1*	2,4	U025	A	10 (4.54)
Ethane, pentachloro-	76017	Pentachloroethane	1*	4	U184	A	10 (4.54)
Ethane, 1,1,1,2-tetrachloro-	630206	1,1,1,2-Tetrachloroethane	1*	4	U208	B	100 (45.4)
Ethane, 1,1,2,2-tetrachloro-	79345	1,1,2,2-Tetrachloroethane	1*	2,4	U209	B	100 (45.4)

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			RQ	Code	RCRA Waste Number	Category	Pounds (Kg)
Ethanethioamide	62555	Thioacetamide	1*	4	U218	A	10 (4.54)
Ethane, 1,1,1-trichloro-	71556	Methyl chloroform 1,1,1-Trichloroethane	1*	2,4	U226	C	1,000 (454)
Ethane, 1,1,2-trichloro-	79005	1,1,2-Trichloroethane	1*	2,4	U227	B	100 (45.4)
Ethanimidothioic acid, N-[(methyl-amino)carbonyloxy]-, methyl ester	16752775	Methomyl	1*	4	P066	B	100 (45.4)
Ethanol, 2-ethoxy-	110805	Ethylene glycol monoethyl ether	1*	4	U359	C	1,000 (454)
Ethanol, 2,2'-(nitrosoimino)bis-	1116547	N-Nitrosodiethanolamine	1*	4	U173	X	1 (0.454)
Ethanone, 1-phenyl-	98862	Acetophenone	1*	4	U004	D	5,000 (2,270)
Ethene, chloro-	75014	Vinyl chloride	1*	2,3,4	U043	X	1 (0.454)
Ethene, 2-chloroethoxy-	110758	2-Chloroethyl vinyl ether	1*	2,4	U042	C	1,000 (454)
Ethene, 1,1-dichloro-	75354	Vinylidene chloride 1,1-Dichloroethylene	5,000	1,2,4	U078	B	100 (45.4)
Ethene, 1,2-dichloro- (E)	156605	1,2-Dichloroethylene	1*	2,4	U079	C	1,000 (454)
Ethene, tetrachloro-	127184	Perchloroethylene Tetrachloroethene Tetrachloroethylene	1*	2,4	U210	B	100 (45.4)
Ethene, trichloro-	79016	Trichloroethene Trichloroethylene	1,000	1,2,4	U228	B	100 (45.4)
Ethion	563122		10	1		A	10 (4.54)
Ethyl acetate	141786	Acetic acid, ethyl ester	1*	4	U112	D	5,000 (2,270)
Ethyl acrylate	140885	2-Propenoic acid, ethyl ester	1*	4	U113	C	1,000 (454)
Ethylbenzene	100414		1,000	1,2		C	1,000 (454)
Ethyl carbamate (urethane)	51796	Carbamic acid, ethyl ester	1*	4	U238	B	100 (45.4)
Ethyl cyanide	107120	Propanenitrile	1*	4	P101	A	10 (4.54)
Ethylenebisdithiocarbamic acid, salts & esters	111546	Carbamodithioic acid, 1,2-ethanediyldis, salts & esters	1*	4	U114	D	5,000 (2,270)
Ethylenediamine	107153		1,000	1		D	5,000 (2,270)
Ethylenediamine-tetraacetic acid (EDTA)	60004		5,000	1		D	5,000 (2,270)
Ethylene dibromide	106934	Ethane, 1,2-dibromo-	1,000	1,4	U067	X	1 (0.454)
Ethylene dichloride	107062	Ethane, 1,2-dichloro- 1,2-Dichloroethane	5,000	1,2,4	U077	B	100 (45.4)
Ethyl methacrylate	97632	2-Propenoic acid, 2-methyl-, ethyl ester	1*	4	U118	C	1,000 (454)
Ethyl methanesulfonate	62500	Methanesulfonic acid, ethyl ester	1*	4	U119	X	1 (0.454)
Famphur	52857	Phosphorothioic acid, O,[4-[(di-methyl-amino) sulfonyl] phenyl] O,O-dimethyl ester	1*	4	P097	C	1,000 (454)

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Ferric ammonium citrate			1,000	1		C	1,000 (454)
Ferric ammonium oxalate	1185575		1,000	1		C	1,000 (454)
	2944674						
Ferric chloride	55488874		1,000	1		C	1,000 (454)
Ferric fluoride	7705080		100	1		B	100 (45.4)
Ferric nitrate	7783508		1,000	1		C	1,000 (454)
Ferric sulfate	10421484		1,000	1		C	1,000 (454)
Ferrous ammonium sulfate	10028225		1,000	1		C	1,000 (454)
Ferrous chloride	10045893		100	1		B	100 (45.4)
Ferrous sulfate	7758943		1,000	1		C	1,000 (454)
	7720787						
Fluoranthene	7782630	Benzo[j,k]fluorene	1*	2,4	U120	B	100 (45.4)
Fluorene	206440		1*	2		D	5,000 (2,270)
Fluorine	86737		1*	4	P056	A	10 (4.54)
Fluoroacetamide	7782414	Acetamide, 2-Fluoro-	1*	4	P057	B	100 (45.4)
Fluoroacetic acid, sodium salt	640197	Acetic acid, fluoro-, sodium salt	1*	4	P058	A	10 (4.54)
Formaldehyde	62748		1,000	1,4	U122	B	100 (45.4)
Formic acid	50000		5,000	1,4	U123	D	5,000 (2,270)
Fulminic acid, mercury(2+) salt	64186	Mercury fulminate	1*	4	P065	A	10 (4.54)
Fumaric acid	628864		5,000	1		D	5,000 (2,270)
Furan	110178	Furfuran	1*	4	U124	B	100 (45.4)
Furan, tetrahydro-	110009	Tetrahydrofuran	1*	4	U213	C	1,000 (454)
2-Furancarboxaldehyde	109999	Furfural	1,000	1,4	U125	D	5,000 (2,270)
2,5-Furandione	98011	Maleic anhydride	5,000	1,4	U147	D	5,000 (2,270)
Furfural	108316	2-Furancarboxaldehyde	1,000	1,4	U125	D	5,000 (2,270)
Furfuran	98011	Furan	1*	4	U124	B	100 (45.4)
Glucopyranose, 2-deoxy-2-(3-methyl-3-nitrosoureido)-	110009	D-Glucose, 2-deoxy-2-[(methylnitrosoamino)-carbonyl] amino]	1*	4	U206	X	1 (0.454)
	18883664	Streptozotocin					
D-Glucose, 2-deoxy-2-[(methylnitrosoamino)-carbonyl]amino]-	18883664	Glucopyranose, 2-deoxy-2-(3-methyl-3-nitrosoureido)-	1*	4	U206	X	1 (0.454)
		Streptozotocin					
Glycidylaldehyde	765344	Oxiranecarboxaldehyde	1*	4	U126	A	10 (4.54)
Buanidine, N-methyl-N'-nitro-N-nitroso-	70257	MNNG	1*	4	U163	A	10 (4.54)
Guthion	86500		1	1		X	1 (0.454)
Haloethers	N.A.		1*	2			**
Halomethanes	N.A.		1*	2			**
Heptachlor	76448	4,7-Methano-1H-indene, 1,4,5,6,7,8,8-heptachloro- 1a,4,7,7a-tetrahydro-	1	1,2,4	P059	X	1 (0.454)

Hazardous Substances and Reportable Quantities (Note: All Comments/Notes Are at the End of This Table)							
Hazardous Substance	CASRN	Regulatory Synonyms	Statutory			Final RQ	
			RQ	Code	RCRA Waste Number	Category	Pounds (Kg)
Heptachlor and Metabolites	N.A.		1*	2			**
Heptachlor epoxide	1024573		1*	2		X	1 (0.454)
Hexachlorobenzene	118741	Benzene, hexachloro-	1*	2,4	U127	A	10 (4.54)
Hexachlorobutadiene	87683	1,3-Butadiene, 1,1,2,3,4,4-hexachloro-	1*	2,4	U128	X	1 (0.454)
Hexachlorochyclohexane (all isomers)	608731		1*	2			**
Hexachlorocyclohexane (gamma isomer)	58899	Cyclohexane, 1,2,3,4,5,6-hexachloro-, (1alpha, 2alpha,3beta,4alpha,5alpha,6beta)-gamma-BHC	1	1,2,4	U129	X	1 (0.454)
Hexachlorocyclopentadiene	77474	Lindane 1,3-Cyclopentadiene,1,2,3,4,5,5-hexachloro-	1	1,2,4	U130	A	10 (4.54)
Hexachloroethane	67721	Ethane, hexachloro-	1*	2,4	U131	B	100 (45.4)
Hexachlorophene	70304	Phenol, 2,2'-methylenebis [3,4,6-trichloro-	1*	4	U132	B	100 (45.4)
Hexachloropropene	1888717	1-Propene, 1,1,2,3,3,3-hexachloro-	1*	4	U243	C	1,000 (454)
Hexaethyl tetraphosphate	757584	Tetraphosphoric acid, hexaethyl ester	1*	4	P062	B	100 (45.4)
Hydrazine	302012		1*	4	U133	X	1 (0.454)
Hydrazine, 1,2-diethyl-	1615801	N,N'-Diethylhydrazine	1*	4	U086	A	10 (4.54)
Hydrazine, 1,1-dimethyl-	57147	1,1-Dimethylhydrazine	1*	4	U098	A	10 (4.54)
Hydrazine, 1,2-dimethyl-	540738	1,2-Dimethylhydrazine	1*	4	U099	X	1 (0.454)
Hydrazine, 1,2-diphenyl-	122667	1,2-Diphenylhydrazine	1*	2,4	U109	A	10 (4.54)
Hydrazine, methyl-	60344	Methyl hydrazine	1*	4	P068	A	10 (4.54)
Hydrazinecarbothioamide	79196	Thiosemicarbazide	1*	4	P116	B	100 (45.4)
Hydrochloric acid	7647010	Hydrogen chloride	5,000	1		D	5,000 (2,270)
Hydrocyanic acid	74908	Hydrogen cyanide	10	1,4	P063	A	10 (4.54)
Hydrofluoric acid	7664393	Hydrogen fluoride	5,000	1,4	U134	B	100 (45.4)
Hydrogen chloride	7647010	Hydrochloric acid	5,000	1		D	5,000 (2,270)
Hydrogen cyanide	74908	Hydrocyanic acid	10	1,4	P063	A	10 (4.54)
Hydrogen fluoride	7664393	Hydrofluoric acid	5,000	1,4	U134	B	100 (45.4)
Hydrogen sulfide	7783064	Hydrogen sulfide H2S	100	1,4	U135	B	100 (45.4)
Hydrogen sulfide H2S	7783064	Hydrogen sulfide	100	1,4	U135	B	100 (45.4)
Hydroperoxide, 1-methyl-1-phenylethyl-	80159	alpha,alpha-Dimethylbenzylhydroperoxide	1*	4	U096	A	10 (4.54)
2-Imidazolidinethione	96457	Ethylenethiourea	1*	4	U116	A	10 (4.54)
Indeno(1,2,3-cd)pyrene	193395	1,10-(1,2-Phenylene)pyrene	1*	2,4	U137	B	100 (45.4)
1,3-isobenzofurandione	85449	Phthalic anhydride	1*	4	U190	D	5,000 (2,270)
Isobutyl alcohol							

Hazardous Substances and Reportable Quantities [Note: All Comments/Notes Are at the End of This Table]							
Hazardous Substance	CASRN	Regulatory Synonyms	Statutory			Final RQ	
			RQ	Code	RCRA Waste Number	Category	Pounds (Kg)
Isobutyl alcohol	78831	1-Propanol, 2-methyl-	1*	4	U140	D	5,000 (2,270)
Isodrin	465736	1,4,5,8-Dimethanonaphthalene, 1,2,3,4,10,10-hexachloro- 1,4,4a,5,7,8a-hexahydro, (1alpha,4alpha,4abeta,5beta,8bet a,8abeta)-	1*	4	P060	X	1 (0.454)
Isophorone	78591		1*	2		D	5,000 (2,270)
Isoprene	78795		1,000	1		B	100 (45.4)
Isopropanolamine dodecylbenzenesulfonate	42504461	1,3-Benzodioxole, 5-(1-propenyl)-	1,000	1		C	1,000 (454)
Isosatorel	120581	Muscimol	1*	4	U141	B	100 (45.4)
3(2H)-Isoxazolone, 5-(aminomethyl)-	2763964	5-(Aminomethyl)-3-isoxazolol	1*	4	P007	C	1,000 (454)
Kepone	143500	1,3,4-Metheno-2H-cyclobutal[cd] pentalen-2- one, 1,1a,3,3a,4,5,5a,5b,6- decachlorooctahydro-	1*	1,4	U142	X	1 (0.454)
Lasiocarpine	303344	2-Butenoic acid, 2-methyl-, 7I [2,3- dihydroxy-2-(1- methoxyethyl)-3-methyl-1- xobutoxymethyl]- 2,3,5,7a-tetrahydro-1H pyrrolizin-1-yl ester, [1S- [1alpha(Z),7(2S*,3R*), 7aalpha]]-	1*	4	U143	A	10 (4.54)
Lead††	7439921	Acetic acid, lead(2+) salt	1*	2		A	10 (4.54)
Lead acetate	301042		5,000	1,4	U144	A	10 (4.54)
Lead and compounds	N.A.		1*	2			**
Lead arsenate	7784409		5,000	1		X	1 (0.454)
	7645252						
	10102484	Lead subacetate					
Lead,bis(acetato-O)tetrahydroxytri	1335326		1*	4	U146	A	10 (4.54)
Lead chloride	7758954		5,000	1		A	10 (4.54)
Lead fluoborate	13814965		5,000	1		A	10 (4.54)
Lead fluoride	7783462		1,000	1		A	10 (4.54)
Lead iodide	10101630		5,000	1		A	10 (4.54)
Lead nitrate	10099748	Phosphoric acid, lead(2+) salt (2:3)	5,000	1		A	10 (4.54)
Lead phosphate	7446277		1*	4	U145	A	10 (4.54)

Hazardous Substances and Reportable Quantities (Note: All Comments/Notes Are at the End of This Table)							
Hazardous Substance	CASRN	Regulatory Synonyms	Statutory			Final RQ	
			RQ	Code	RCRA Waste Number	Category	Pounds (Kg)
Lead stearate	1072351 7428480 52652592 56189094		5,000	1		A	10 (4.54)
Lead subacetate	1335326	Lead, bis(acetato-O)tetrahydroxytri	1*	4	U146	A	10 (4.54)
Lead sulfate	7446142 15739807		5,000	1		A	10 (4.54)
Lead sulfide	1314870		5,000	1		A	10 (4.54)
Lead thiocyanate	592870		5,000	1		A	10 (4.54)
Lindane	58899	Cyclohexane, 1,2,3,4,5,6-hexachloro-, (1alpha, 2alpha, 3beta, 4alpha, 5alpha, 6beta) - gamma-BHC  Hexachlorocyclohexane (gamma isomer)	1	1,2,4	U129	X	1 (0.454)
Lithium chromate	14307358		1,000	1		A	10 (4.54)
Malathion	121755		10	1		B	100 (45.4)
Maleic acid	110167		5,000	1		D	5,000 (2,270)
Maleic anhydride	108316	2,5-Furandione	5,000	1,4	U147	D	5,000 (2,270)
Maleic hydrazide	123331	3,6-Pyridazinedione, 1,2-dihydro-	1*	4	U148	D	5,000 (2,270)
Malononitrile	109773	Propanedinitrile	1*	4	U149	C	1,000 (454)
Melphalan	148823	L-Phenylalanine, 4- [bis(2-chloroethyl) amino]	1*	4	U150	X	1 (0.454)
Mercaptodimethur	2032657		100	1		A	10 (4.54)
Mercuric cyanide	592041		1	1		X	1 (0.454)
Mercuric nitrate	10045940		10	1		A	10 (4.54)
Mercuric sulfate	7783359		10	1		A	10 (4.54)
Mercuric thiocyanate	592858		10	1		A	10 (4.54)
Mercurous nitrate	10415755 7782867		10	1		A	10 (4.54)
Mercury	7439976		1*	2,3,4	U151	X	1 (0.454)
Mercury and compounds	N.A.		1*	2			**
Mercury, (acetate-O)phenyl-	62384	Phenylmercury acetate	1*	4	P092	B	100 (45.4)
Mercury fulminate	628864	Fulminic acid, mercury(2+) salt	1*	4	P065	A	10 (4.54)
Methacrylonitril	126987	2-Propenenitrile, 2-methyl-	1*	4	U152	C	1,000 (454)
Methanamine, N-methyl-	124403	Dimethylamine	1,000	1,4	U092	C	1,000 (454)
Methanamine, N-methyl-N-nitroso-	62759	N-Nitrosodimethylamine	1*	2,4	P082	A	10 (4.54)
Methane, bromo-	74839	Methyl bromide	1*	2,4	U029	C	1,000 (454)
Methane, chloro-	74873	Methyl chloride	1*	2,4	U045	B	100 (45.4)
Methane, chloromethoxy-	107302	Chloromethyl methyl ether	1*	4	U046	A	10 (4.54)

Hazardous Substances and Reportable Quantities [Note: All Comments/Notes Are at the End of This Table]							
Hazardous Substance	CASRN	Regulatory Synonyms	Statutory			Final RQ	
			RQ	Code	RCRA Waste Number	Category	Pounds (Kg)
Methane, dibromo-	74953	Methylene bromide	1*	4	U068	C	1,000 (454)
Methane, dichloro-	75092	Methylene chloride	1*	2,4	U080	C	1,000 (454)
Methane, dichlorodifluoro-	75718	Dichlorodifluoromethane	1*	4	U075	D	5,000 (2,270)
Methane, iodo-	74884	Methyl iodide	1*	4	U138	B	100 (45.4)
Methane, isocyanato-	624839	Methyl isocyanate	1*	3,4	P064	A	10 (4.54)
Methane, oxybis(chloro-	542881	Dichloromethyl ether	1*	4	P016	A	10 (4.54)
Methanesulfonyl chloride, trichloro-	594423	Trichloromethanesulfonyl chloride	1*	4	P118	B	100 (45.4)
Methanesulfonic acid, ethyl ester	62500	Ethyl methanesulfonate	1*	4	U119	X	1 (0.454)
Methane, tetrachloro-	56235	Carbon tetrachloride	5,000	1,2,4	U211	A	10 (4.54)
Methane, tetrantro-	509148	Tetranitromethane	1*	4	P112	A	10 (4.54)
Methane, tribromo-	75252	Bromoform	1*	2,4	U225	B	100 (45.4)
Methane, trichloro-	67663	Chloroform	5,000	1,2,4	U044	A	10 (4.54)
Methane, trichlorofluoro-	75694	Trichloromonofluoromethane	1*	4	U121	D	5,000 (2,270)
Methanethiol	74931	Methylmercaptan Thiomethanol	100	1,4	U153	B	100 (45.4)
6,9-Methano-2,4,3-benzodioxathiepin, 6,7,8,9,10,10-hexachloro- 1,5,5a,6,9,9a-hexahydro-,3-oxide	115297	Endosulfan	1	1,2,4	P050	X	1 (0.454)
1,3,4-Metheno-2H-cyclobutal [cd]pentalen- 2-one, 1,1a,3,3a,4,5,5,5a,5b,6- decachloroocthydro-	143500	Kepone	1	1,4	U142	X	1 (0.454)
4,7-Methano-1H-indene, 1,4,5,6,7,8,8- heptachloro-3a,4,7,7a-tetrahydro-	76448	Heptachlor	1	1,2,4	P059	X	1 (0.454)
4,7-Methano-1H-indene, 1,2,4,5,6,7,8,8- octachloro-2,3,3a,4,7,7a-hexahydro-	57749	Chlordane	1	1,2,4	U036	X	1 (0.454)
		Chlordane, alpha & gamma isomers Chlordane, technical					
Methanol	67561	Methyl alcohol		4	U154	D	5,000 (2,270)
Methapyrilene	91805	1,2-Ethanediamine, N,N-dimethyl-N'- 2-pyridinyl-N'-(2-thienylmethyl)-	1*	4	U155	D	5,000 (2,270)
Methomyl	16752775	Ethanimidothioic acid, N-[[(methyl- amino)carbonyl]oxy]-, methyl ester	1*	4	P066	B	100 (45.4)
Methoxychlor	72435	Benzene, 1,1'-(2,2,2- trichloroethylidene) bis [4- methoxy-	1	1,4	U247	X	1 (0.454)
Methyl alcohol	67561	Methanol	1*	4	U154	D	5,000 (2,270)

Hazardous Substances and Reportable Quantities (Note: All Comments/Notes Are at the End of This Table)							
Hazardous Substance	CASRN	Regulatory Synonyms	Statutory			Final RQ	
			RQ	Code	RCRA Waste Number	Category	Pounds (Kg)
Methyl bromide	74839	Methane, bromo-	1*	2,4	U029	C	1,000 (454)
1-Methylbutadiene	504609	1,3-Pentadiene	1*	4	U086	B	100 (45.4)
Methyl chloride	74873	Methane, chloro-	1*	2,4	U045	B	100 (45.4)
Methyl chlorocarbonate	79221	Carbonachloridic acid, methyl ester Methyl chloroformate	1*	4	U156	C	1,000 (454)
Methyl chloroform	71556	Ethane, 1,1,1-trichloro- 1,1,1-Trichloroethane	1*	2,4	U226	C	1,000 (454)
Methyl chloroformate	79221	Carbonachloridic acid, methyl ester Methyl chlorocarbonate	1*	4	U156	C	1,000 (454)
3-Methylcholanthrene	56495	Benz (j)aceanthrylene, 1,2-dihydro-3-methyl-	1*	4	U157	A	10 (4.54)
4,4'-Methylenebis(2-chloroaniline)	101144	Benzenamine, 4,4'-methylenebis(2-chloro-	1*	4	U158	A	10 (4.54)
Methylene bromide	74953	Methane, dibromo-	1*	4	U068	C	1,000 (454)
Methylene chloride	75092	Methane, dichloro-	1*	2,4	U080	C	1,000 (454)
Methyl ethyl ketone (MEK)	78933	2-Butanone	1*	4	U159	D	5,000 (2,270)
Methyl ethyl ketone peroxide	1338234	2-Butanone peroxide	1*	4	U160	A	10 (4.54)
Methyl hydrazine	60344	Hydrazine, methyl-	1*	4	P068	A	10 (4.54)
Methyl iodide	74884	Methane, iodo-	1*	4	U138	B	100 (45.4)
Methyl isobutyl ketone	108101	4-Methyl-2-pentanone	1*	4	U161	D	5,000 (2,270)
Methyl isocyanate	624839	Methane, isocyanato-	1*	3,4	P064	A	10 (4.54)
2-Methylacetonitrile	75865	Acetone cyanohydrin Propanenitrile, 2-hydroxy-2-methyl	10	1,4	P069	A	10 (4.54)
Methylmercaptan	74931	Methanethiol Thiomethanol	100	1,4	U153	B	100 (45.4)
Methyl methacrylate	80626	2-Propenoic acid, 2-methyl-, methyl ester	5,000	1,4	U162	C	1,000 (454)
Methyl parathion	298000	Phosphorothioic acid, O,O-dimethyl O-(4-nitrophenyl) ester	100	1,4	P071	B	100 (45.4)
4-Methyl-2-pentanone	108101	Methyl isobutyl ketone	1*	4	U161	D	5,000 (2,270)
Methylthiouracil	56042	4(1H)-Pyrimidinone, 2,3-dihydro-6-methyl-2-thioxo-	1*	4	U164	A	10 (4.54)
Mevinphos	7786347		1	1		A	10 (4.54)
Mexacarbate	315184		1,000	1		C	1,000 (454)
Miltomycin C	50077	Azinno[2',3':4]pyrrolo [1,2-a]indole-4,7-dione,6-amino-8-[(amino-carbonyl)oxy] methyl]-1,1a,2,8,8a,8b-hexahydro-8a-methoxy-5-methyl-, [1aS-(1aalpha,8beta,8aalpha,8balpha)]-8aalpha,8balpha]]-	1*	4	U010	A	10 (4.54)

Hazardous Substances and Reportable Quantities [Note: All Comments/Notes Are at the End of This Table]							
Hazardous Substance	CASRN	Regulatory Synonyms	Statutory			Final RQ	
			RQ	Code	RCRA Waste Number	Category	Pounds (Kg)
MNNG	70257	Guanidine, N-methyl-N'-nitro-N-nitroso-	1*	4	U163	A	10 (4.54)
Monoethylamine	75047		1,000	1		B	100 (45.4)
Monomethylamine	74895		1,000	1		B	100 (45.4)
Multi Source Leachate			1*	4	F039	X	1 (0.454)
Muscimol	2763964	3(2H) = Isoxazolone, 5-(aminomethyl)- 5- (Aminomethyl)- 3-isoxazolol	1*	4	P007	C	1,000 (454)
Naled	300765	Daunomycin	10	1		A	10 (4.54)
5,12-Naphthacenedione, 8-acetyl-10- [3-amino-2,3,6-trideoxy-alpha-L-lyxohexopyranosyl)oxy]-7,8,9,10-tetrahydro-6,8,11-trihydroxy-1-methoxy-, (8C-cis)-	20830813		1*	4	U059	A	10 (4.54)
1-Naphthalenamine	134327	alpha-Naphthylamine	1*	4	U167	B	100 (45.4)
2-Naphthalenamine	91598	beta-Naphthylamine	1*	4	U168	A	10 (4.54)
Naphthalenamine, N,N'-bis(2-chloroethyl)-	494031	Chloronaphazine	1*	4	U026	B	100 (45.4)
Naphthalene	91203	beta-Chloronaphthalene	5,000	1,2,4	U165	B	100 (45.4)
Naphthalene, 2-chloro-	91587	2-Chloronaphthalene	1*	2,4	U047	D	5,000 (2,270)
1,4-Naphthalenedione	130154	1,4-Naphthoquinone	1*	4	U166	D	5,000 (2,270)
2,7-Naphthalenedisulfonic acid, 3,3'-[(3,3'-dimethyl-(1,1'-biphenyl)-4,4'-diyl)-bis(azo)]bis(5-amino-4-hydroxy)-tetrasodium salt	72571	Trypan blue	1*	4	U236	A	10 (4.54)
Naphthenic acid	1338245	1,4-Naphthalenedione	100	1		B	100 (45.4)
1,4-Naphthoquinone	130154	1-Naphthalenamine	1*	4	U166	D	5,000 (2,270)
alpha-Naphthylamine	134327	2-Naphthalenamine	1*	4	U167	B	100 (45.4)
beta-Naphthylamine	91598	Thiourea, 1-naphthalenyl-	1*	4	U168	A	10 (4.54)
alpha-Naphthylthiourea	86884		1*	4	P072	B	100 (45.4)
Nickel††	7440020		1*	2		B	100 (45.4)
Nickel ammonium sulfate	15699180		5,000	1		B	100 (45.4)
Nickel and compounds	N.A.	Nickel carbonyl Ni(CO)4, (T-4)-	1*	2		**	
Nickel carbonyl	13463393	Nickel carbonyl	1*	4	P073	A	10 (4.54)
Nickel carbonyl Ni(CO)4, (T-4)-	13463393		1*	4	P073	A	10 (4.54)
Nickel chloride	7718549		5,000	1		B	100 (45.4)
	37211055	Nickel cyanide Ni(CN)2					
Nickel cyanide	557197	Nickel cyanide	1*	4	P074	A	10 (4.54)
Nickel cyanide Ni(CN)2	557197		1*	4	P074	A	10 (4.54)
Nickel hydroxide	12054487		1,000	1		A	10 (4.54)

Hazardous Substances and Reportable Quantities (Note: All Comments/Notes Are at the End of This Table)							
Hazardous Substance	CASRN	Regulatory Synonyms	Statutory			Final RQ	
			RQ	Code	RCRA Waste Number	Category	Pounds (Kg)
Nickel nitrate	14216752		5,000	1		B	100 (45.4)
Nickel sulfate	778814		5,000	1		B	100 (45.4)
Nicotine, & salts	54115	Pyridine,3-(1-methyl-2-pyrrolidinyl)-, (S)-	1*	4	P075	B	100 (45.4)
Nitric acid	7697372		1,000	1		C	1,000 (454)
Nitric acid, thallium (1+) salt	10102451	Thallium (I) nitrate	1*	4	U217	B	100 (45.4)
Nitric oxide	10102439	Nitrogen oxide NO	1*	4	P076	A	10 (4.54)
p-Nitroaniline	100016	Benzenamine, 4-nitro-	1*	4	P077	D	5,000 (2,270)
Nitrobenzene	98953	Benzene, nitro-	1,000	1,2,4	U169	C	1,000 (454)
Nitrogen dioxide	10102440	Nitrogen oxide NO2	1,000	1,4	P078	A	10 (4.54)
	10544726						
Nitrogen oxide NO	10102439	Nitric oxide	1*	4	P076	A	10 (4.54)
Nitrogen oxide NO2	10102440	Nitrogen dioxide	1,000	1,4	P078	A	10 (4.54)
	10544726						
Nitroglycerine	55630	1,2,3-Propanetriol, trinitrate-	1*	4	P081	A	10 (4.54)
Nitrophenol (mixed)	25154556		1,000	1		B	100 (45.4)
m-Nitrophenol	554847					B	100 (45.4)
o-Nitrophenol	88755	2-Nitrophenol					
p-Nitrophenol	100027	Phenol, 4-nitro- 4-Nitrophenol					
o-Nitrophenol	88755	2-Nitrophenol	1,000	1,2		B	100 (45.4)
p-Nitrophenol	100027	Phenol, 4-Nitro- 4-Nitrophenol	1,000	1,2,4	U170	B	100 (45.4)
2-Nitrophenol	88755	o-Nitrophenol	1,000	1,2		B	100 (45.4)
4-Nitrophenol	100027	p-Nitrophenol Phenol, 4-nitro-	1,000	1,2,4	U170	B	100 (45.4)
Nitrophenols	N.A.		1*	2			**
2-Nitropropane	79469	Propane, 2-nitro-	1*	4	U171	A	10 (4.54)
Nitrosamines	N.A.		1*	2			**
N-Nitrosodi-n-butylamine	924163	1-Butanamine, N-butyl-N-nitroso-	1*	4	U172	A	10 (4.54)
N-Nitrosodiethanolamine	1116547	Ethanol, 2,2'-(nitrosoimino)bis-	1*	4	U173	X	1 (0.454)
N-Nitrosodiethylamine	55185	Ethanamine, N-ethyl-N-nitroso-	1*	4	U174	X	1 (0.454)
N-Nitrosodimethylamine	62759	Methanamine, N-methyl-N-nitroso-	1*	2,4	P082	A	10 (4.54)
N-Nitrosodiphenylamine	86306		1*	2		B	100 (45.4)
N-Nitroso-N-ethylurea	759739	Urea, N-ethyl-N-nitroso-	1*	4	U176	X	1 (0.454)
N-Nitroso-N-methylurea	684935	Urea, N-methyl-N-nitroso	1*	4	U177	X	1 (0.454)
N-Nitroso-N-methylurethane	615532	Carbamic acid, methylnitroso-,ethyl ester	1*	4	U178	X	1 (0.454)
N-Nitrosomethylvinylamine	4549400	Vinylamine, N-methyl-N-nitroso-	1*	4	P084	A	10 (4.54)
N-Nitrosopiperidine	100754	Piperidine, 1-nitroso-	1*	4	U179	A	10 (4.54)
N-Nitrosopyrrolidine	930552	Pyrrolidine, 1-nitroso-	1*	4	U180	X	1 (0.454)

Hazardous Substances and Reportable Quantities [Note: All Comments/Notes Are at the End of This Table]							
Hazardous Substance	CASRN	Regulatory Synonyms	Statutory			Final RQ	
			RQ	Code	RCRA Waste Number	Category	Pounds (Kg)
Nitrotoluene	1321126		1,000	1		C	1,000 (454)
m-Nitrotoluene	99081						
o-Nitrotoluene	88722						
p-Nitrotoluene	99990						
5-Nitro-o-toluidine	99558	Benzenamine, 2-methyl-5-nitro-	1*	4	U181	B	100 (45.4)
Octamethylphosphoramide	152169	Diphosphoramidate, octamethyl-	1*	4	P085	B	100 (45.4)
Osmium oxide OsO4 (T-4)-	20816120	Osmium tetroxide	1*	4	P087	C	1,000 (454)
Osmium tetroxide	20816120	Osmium oxide OsO4 (T-4)-	1*	4	P087	C	1,000 (454)
7-Oxabicyclo [2.2.1]heptane-2,3-dicarboxylic acid	145733	Endothall	1*	4	P088	C	1,000 (454)
1,2-Oxathiolane, 2,2-dioxide	1120714	1,3-Propane sultone	1*	4	U193	A	10 (4.54)
2H-1,3,2-Oxazaphosphorin-2-amine, N,N-bis(2-chloroethyl)tetrahydro-, 2-oxide	50180	Cyclophosphamide	1*	4	U058	A	10 (4.54)
Oxirane	75218	Ethylene oxide	1*	4	U115	A	10 (4.54)
Oxiranecarboxyaldehyde	765344	Glycidylaldehyde	1*	4	U126	A	10 (4.54)
Oxirane, (chloromethyl)-	106898	Epichlorohydrin	1,000	1,4	U041	B	100 (45.4)
Paraformaldehyde	30525894		1,000	1		C	1,000 (454)
Paraldehyde	123637	1,3,5-Trioxane, 2,4,6-trimethyl-	1*	4	U182	C	1,000 (454)
Parathion	56382	Phosphorothioic acid, O,O-diethyl O-(4-nitrophenyl) ester	1	1,4	P089	A	10 (4.54)
Pentachlorobenzene	608935	Benzene, pentachloro-	1*	4	U183	A	10 (4.54)
Pentachloroethane	76017	Ethane, pentachloro-	1*	4	U184	A	10 (4.54)
Petachloronitrobenzene (PCNB)	82688	Benzene, pentachloronitro-	1*	4	U185	B	100 (45.4)
Petachlorophenol	87865	Phenol, pentachloro-	10	1,2,4	U242	A	10 (4.54)
1,3-Pentadiene	504609	1-Methylbutadiene	1*	4	U186	B	100 (45.4)
Perchloroethylene	127184	Ethene, tetrachloro- Tetrachloroethene Tetrachloroethylene Acetamide, N-(4-ethoxyphenyl)-	1*	2,4	U210	B	100 (45.4)
Phenacetin	62442		1*	4	U187	B	100 (45.4)
Phenanthrene	85018	Benzene, hydroxy-	1*	2		D	5,000 (2,270)
Phenol	108952	o-Chlorophenol 2-Chlorophenol	1,000	1,2,4	U188	C	1,000 (454)
Phenol, 2-chloro-	95578	p-Chloro-m-cresol	1*	2,4	U048	B	100 (45.4)
Phenol, 4-chloro-3-methyl-	59507	4-Chloro-m-cresol	1*	2,4	U039	D	5,000 (2,270)
		2-Cyclohexyl-4,6-dinitrophenol					
Phenol, 2-cyclohexyl-4,6-dinitro-	131895	2,4-Dichlorophenol	1*	4	P034	B	100 (45.4)
Phenol, 2,4-dichloro-	120832	2,6-Dichlorophenol	1*	2,4	U081	B	100 (45.4)
Phenol, 2,6-dichloro-	87650	Diethylstilbestrol	1*	4	U082	B	100 (45.4)
Phenol, 4,4'-(1,2-diethyl-1,2-ethenediyl) bis-, (E)	56531		1*	4	U089	X	1 (0.454)

Hazardous Substances and Reportable Quantities [Note: All Comments/Notes Are at the End of This Table]							
Hazardous Substance	CASRN	Regulatory Synonyms	Statutory			Final RQ	
			RQ	Code	RCRA Waste Number	Category	Pounds (Kg)
Phenol, 2,4-dimethyl-	105679	2,4-Dimethylphenol	1*	2,4	U101	B	100 (45.4)
Phenol, 2,4-dinitro-	51285	2,4-Dinitrophenol	1,000	1,2,4	P048	A	10 (4.54)
Phenol, methyl-	1319773	Cresol(s) Cresylic acid	1,000	1,4	U052	C	1,000 (454)
m-Cresol	108394	m-Cresylic acid					
o-Cresol	95487	o-Cresylic acid					
p-Cresol	106445	p-Cresylic acid					
Phenol, 2-methyl-4,8-dinitro-	534521	4,6-Dinitro-o-cresol and salts	1*	2,4	P047	A	10 (4.54)
Phenol, 2,2'-methylenebis [3,4,6-trichloro-	70304	Hexachlorophene	1*	4	U132	B	100 (45.4)
Phenol, 2-(1-methylpropyl)-4,6-dinitro	88857	Dinoseb	1*	4	P020	C	1,000 (454)
Phenol, 4-nitro-	100027	p-Nitrophenol	1,000	1,2,4	U170	B	100 (45.4)
		4-Nitrophenol					
Phenol, petachloro-	87865	Pentachlorophenol	10	1,2,4	U242	A	10 (4.54)
Phenol, 2,3,4,6-tetrachloro-	58902	2,3,4,6-Tetrachlorophenol	1*	4	U212	A	10 (4.54)
Phenol, 2,4,5-trichloro-	95954	2,4,5-Trichlorophenol	10	1,4	U230	A	10 (4.54)
Phenol, 2,4,6-trichloro-	88062	2,4,6-Trichlorophenol	10	1,2,4	U231	A	10 (4.54)
Phenol, 2,4,6-trinitro-, ammonium salt	131748	Ammonium picrate	1*	4	P009	A	10 (4.54)
L-Phenylalanine, 4- [bis(2-chloroethyl) amino]	148823	Melphalan	1*	4	U150	X	1 (0.454)
1,10-(1,2-Phenylene)pyrene	193395	Indeno(1,2,3-cd)pyrene	1*	2,4	U137	B	100 (45.4)
Phenylmercury acetate	62384	Mercury, (acetato-O)phenyl-	1*	4	P092	B	100 (45.4)
Phenylthioures	103855	Thiourea, phenyl-	1*	4	P093	B	100 (45.4)
Phorate	298022	Phosphorodithioic acid, O,O-diethyl S-(ethylthio), methyl ester	1*	4	P094	A	10 (4.54)
Phosgene	75445	Carbonic dichloride	5,000	1,4	P095	A	10 (4.54)
Phosphine	7803512		1*	4	P096	B	100 (45.4)
Phosphoric acid	7664382		5,000	1		D	5,000 (2,270)
Phosphoric acid, diethyl 4-nitrophenyl ester	311455	Diethyl-p-nitrophenyl phosphate	1*	4	P041	B	100 (45.4)
Phosphoric acid, lead(2+)salt(2:3)	7446277	Lead phosphate	1*	4	U145	A	10 (4.54)
Phosphorodithioic acid, O,O-diethyl S- [2-(ethylthio)ethyl]ester	298044	Disulfoton	1	1,4	P039	X	1 (0.454)
Phosphorodithioic acid, O,O-diethyl S-(ethylthio), methyl ester	298022	Phorate	1*	4	P094	A	10 (4.54)
Phosphorodithioic acid, O,O-diethyl S-methyl ester	3288582	O,O-Diethyl S-methyl dithiophosphate	1*	4	U087	D	5,000 (2,270)
Phosphorodithioic acid, O,O-dimethyl S-[2(methylamino)-2-oxoethyl] ester	60515	Dimethoate	1*	4	P044	A	10 (4.54)
Phosphorofluoridic acid, bis(1-methylethyl) ester	55914	Diisopropylfluorophosphate	1*	4	P043	B	100 (45.4)
Phosphorothioic acid, O,O-diethyl O-(4-nitrophenyl) ester	56382	Parathion	1	1,4	P089	A	10 (4.54)

Hazardous Substances and Reportable Quantities [Note: All Comments/Notes Are at the End of This Table]							
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			RQ	Code	RCRA Waste Number	Category	Pounds (Kg)
Phosphorothioic acid, O,[4- [(dimethyl-amino) sulfonyl]phenyl]O,O-dimethyl ester	52857	Famphur	1*	4	P097	C	1,000 (454)
Phosphorothioic acid, O,O-dimethyl O-(4-nitrophenyl) ester	298000	Methyl parathion	100	1,4	P071	B	100 (45.4)
Phosphorothioic acid, O,O-diethyl O-pyrazinyl ester	297972	O,O-Diethyl O-pyrazinyl phosphorothioate	1*	4	P040	B	100 (45.4)
Phosphorus	7723140		1	1		X	1 (0.454)
Phosphorous oxychloride	10025873		5,000	1		C	1,000 (454)
Phosphorus pentasulfide	1314803	Phosphorus sulfide Sulfur phosphide	100	1,4	U189	B	100 (45.4)
Phosphorus sulfide	1314803	Phosphorus pentasulfide Sulfur phosphide	100	1,4	U189	B	100 (45.4)
Phosphorus trichloride	7719122		5,000	1		C	1,000 (454)
Phthalate esters	N.A.		1*	2			**
Phthalic anhydride	85449	1,3-isobenzofurandione	1*	4	U190	D	5,000 (2,270)
2-Picoline	109068	Pyridine, 2-methyl-	1*	4	U191	D	5,000 (2,270)
Piperidine, 1-nitroso-	100754	N-Nitrosopiperidine	1*	4	U179	A	10 (4.54)
Plumbane, tetraethyl-	78002	Tetraethyl lead	100	1,4	P110	A	10 (4.54)
Polychlorinated biphenyls (PCBs)	1336363		10	1,2		X	1 (0.454)
Aroclor 1016	12674112	POLYCHLORINATED BIPHENYLS (PCSs)					
Aroclor 1221	11104282	POLYCHLORINATED BIPHENYLS (PCSs)					
Aroclor 1232	11131165	POLYCHLORINATED BIPHENYLS (PCSs)					
Aroclor 1242	53469219	POLYCHLORINATED BIPHENYLS (PCSs)					
Aroclor 1248	12672296	POLYCHLORINATED BIPHENYLS (PCSs)					
Aroclor 1254	11097691	POLYCHLORINATED BIPHENYLS (PCSs)					
Aroclor 1260	11096825	POLYCHLORINATED BIPHENYLS (PCSs)					
Polynuclear aromatic hydrocarbons	N A.		1*	2			**
Potassium arsenate	7784410		1,000	1		X	1 (0.454)
Potassium arsenite	10124502		1,000	1		X	1 (0.454)
Potassium bichromate	7778509		1,000	1		A	10 (4.54)
Potassium chromate	7789006		1,000	1		A	10 (4.54)
Potassium cyanide	151508	Potassium cyanide K (CN)	10	1,4	P098	A	10 (4.54)
Potassium cyanide K(CN)	151508	Potassium cyanide	10	1,4	P098	A	10 (4.54)

Hazardous Substances and Reportable Quantities [Note: All Comments/Notes Are at the End of This Table]							
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			RQ	Code	RCRA Waste Number	Category	Pounds (Kg)
Potassium hydroxide	1310583		1,000	1		C	1,000 (454)
Potassium permanganate	7722647		100	1		B	100 (45.4)
Potassium silver cyanide	506616	Argentate (1-), bis(cyano-C)-, potassium	1*	4	P099	X	1 (0.454)
Pronamide	23950585	Benzamide, 3,5-dichloro-N-(1,1-dimethyl-2-propynyl)-	1*	4	U192	D	5,000 (2,270)
Propanal, 2-methyl-2-(methylthio)-, O-[(methylamino)carbonyl]oxime	116063	Aldicarb	1*	4	P070	X	1 (0.454)
1-Propanamine	107108	n-Propylamine	1*	4	U194	D	5,000 (2,270)
1-Propanamine, N-propyl-	142847	Dipropylamine	1*	4	U110	D	5,000 (2,270)
1-Propanamine, N-nitroso-N-propyl-	621647	Di-n-propylnitrosamine	1*	2,4	U111	A	10 (4.54)
Propane, 1,2-dibromo-3-chloro-	96128	1,2-Dibromo-3-chloropropane	1*	4	U066	X	1 (0.454)
Propane, 2-nitro-	79469	2-Nitropropane	1*	4	U171	A	10 (4.54)
1,3-Propane sultone	1120714	1,2-Oxathiolane, 2,2-dioxide	1*	4	U193	A	10 (4.54)
Propane, 1,2-dichloro-	78875	Propylene dichloride 1,2-Dichloropropane	5,000	1,2,4	U083	C	1,000 (454)
Propanedinitrile	109773	Malononitrile	1*	4	U149	C	1,000 (454)
Propanenitrile	107120	Ethyl cyanide	1*	4	P101	A	10 (4.54)
Propanenitrile, 3-chloro-	542767	3-Chloropropionitrile	1*	4	P027	C	1,000 (454)
Propanenitrile, 2-hydroxy-2-methyl-	75865	Acetone cyanohydrin 2-Methylactonitrile	10	1,4	P069	A	10 (4.54)
Propane, 2,2'-oxybis [2-chloro-1,2,3-Propanetriol, trinitrate-	108601	Dichloroisopropyl ether	1*	2,4	U027	C	1,000 (454)
1-Propanol, 2,3-dibromo-, phosphate (3:1)	55630	Nitroglycerine	1*	4	P081	A	10 (4.54)
1-Propanol, 2-methyl-	126727	Tris(2,3-dibromopropyl) phosphate	1*	4	U235	A	10 (4.54)
2-Propanone	78831	Isobutyl alcohol	1*	4	U140	D	5,000 (2,270)
2-Propanone, 1-bromo-	67641	Acetone	1*	4	U002	D	5,000 (2,270)
Propargite	598312	Bromoacetone	1*	4	P017	C	1,000 (454)
Propargyl alcohol	2312358		10	1		A	10 (4.54)
2-Propenal	107197	2-Propyn-1-ol	1*	4	P102	C	1,000 (454)
2-Propenamide	107028	Acrolein	1	1,2,4	P003	X	1 (0.454)
1-Propene, 1,1,2,3,3,3-hexachloro-	79061	Acrylamide	1*	4	U007	D	5,000 (2,270)
1-Propene, 1,3-dichloro-	1888717	Hexachloropropene	1*	4	U243	C	1,000 (454)
2-Propenenitrile	542756	1,3-Dichloropropene	5,000	1,2,4	U084	B	100 (45.4)
2-Propenenitrile, 2-methyl-	107131	Acrylonitrile	100	1,2,4	U009	B	100 (45.4)
2-Propenoic acid	126987	Methacrylonitrile	1*	4	U152	C	1,000 (454)
2-Propenoic acid, ethyl ester	79107	Acrylic acid	1*	4	U008	D	5,000 (2,270)
2-Propenoic acid, 2-methyl-, ethyl ester	140885	Ethyl acrylate	1*	4	U113	C	1,000 (454)
2-Propenoic acid, 2-methyl-, methyl ester	97632	Ethyl methacrylate	1*	4	U118	C	1,000 (454)
2-Propen-1-ol	80626	Methyl methacrylate	5,000	1,4	U162	C	1,000 (454)
Propionic acid	107186	Allyl alcohol	100	1,4	P005	B	100 (45.4)
	79094		5000	1		D	5,000 (2,270)

Hazardous Substances and Reportable Quantities [Note: All Comments/Notes Are at the End of This Table]							
Hazardous Substance	CASRN	Regulatory Synonyms	Statutory			Final RQ	
			RQ	Code	RCRA Waste Number	Category	Pounds (Kg)
Propionic acid, 2-(2,4,5-trichlorophe-noxy)	93721	Silvex (2,4,5-TP) 2,4,5-TP acid	100	1,4	U233	B	100 (45.4)
Propionic anhydride	123626		5,000	1		D	5,000 (2,270)
n-Propylamine	107108	1-Propanamine	1*	4	U194	D	5,000 (2,270)
Propylene dichloride	78875	Propane, 1,2-dichloro- 1,2-Dichloropropane	5,000	1,2,4	U083	C	1,000 (454)
Propylene oxide	75569		5,000	1		B	100 (45.4)
1,2-Propylenimine	75558	Aziridine, 2-methyl-	1*	4	P067	X	1 (0.454)
2-Propyn-1-ol	107197	Propargyl alcohol	1*	4	P102	C	1,000 (454)
Pyrene	129000		1*	2		D	5,000 (2,270)
Pyrethrins	121299		1,000	1		X	1 (0.454)
	121211						
	80003347						
3,6-Pyridazinedione, 1,2-dihydro-	123331	Maleic hydrazide	1*	4	U148	D	5,000 (2,270)
4-Pyridinamine	504245	4-Aminopyridine	1*	4	P008	C	1,000 (454)
Pyridine	110861		1*	4	U196	C	1,000 (454)
Pyridine, 2-Methyl-	109068	2-Picoline	1*	4	U191	D	5,000 (2,270)
Pyridine, 3-(1-methyl-2-pyrrolidinyl)-, (S)-	54115	Nicotine, & salts	1*	4	P075	B	100 (45.4)
2,4-(1H,2H)-Pyrimidinedione, 5- [bis(2-chloroethyl)amino]-	66751	Uracil mustard	1*	4	U237	A	10 (4.54)
4(1H)-Pyrimidinone, 2,3-dihydro-6-methyl-2-thioxo-	56042	Methylthiouracil	1*	4	U164	A	10 (4.54)
Pyrrolidine, 1-nitroso-	930552	N-Nitrosopyrrolidine	1*	4	U180	X	1 (0.454)
Quinoline	91225		1,000	1		D	5,000 (2,270)
Radionuclides	N.A.		1*	3			\$
Reserpine	50555	Yohimban-16-carboxylic acid, 11,17-dimethoxy-18- [(3,4,5-trimethox-ybenzoyl)oxy-, methyl ester (3beta,16beta, 17alpha,18beta,20alpha)-	1*	4	U200	D	5,000 (2,270)
Resorcinol	108463	1,3-Benzenediol	1,000	1,4	U201	D	5,000 (2,270)
Saccharin and salts	81072	1,2-Benzisothiazol-3(2H)-one, 1,1-dioxide	1*	4	U202	B	100 (45.4)
Safrole	94597	1,3-Benzodioxole, 5-(2-propenyl)-	1*	4	U203	B	100 (45.4)
Selenious acid	7783008		1*	4	U204	A	10 (4.54)
Selenious acid, dithallium(1+) salt	12039520	Thallium selenite	1*	4	P114	C	1,000 (454)
Selenium††	7782492		1*	2		B	100 (45.4)
Selenium and compounds	N.A.		1*	2			**
Selenium dioxide	7446084	Selenium oxide	1,000	1,4	U204	A	10 (4.54)
Selenium oxide	7446084	Selenium dioxide	1000	1,4	U204	A	10 (4.54)

Hazardous Substances and Reportable Quantities (Note: All Comments/Notes Are at the End of This Table)							
Hazardous Substance	CASRN	Regulatory Synonyms	Statutory			Final RQ	
			RQ	Code	RCRA Waste Number	Category	Pounds (Kg)
Selenium sulfide	7488564	Selenium sulfide SeS2	1*	4	U205	A	10 (4.54)
Selenium sulfide SeS2	7488564	Selenium sulfide	1*	4	U205	A	10 (4.54)
Selenourea	630104		1*	4	P103	C	1,000 (454)
L-Serine, diazoacetate (ester)	115026	Azaserine	1*	4	U015	X	1 (0.454)
Silver††	7440224		1*	2		C	1,000 (454)
Silver and compounds	N A.		1*	2			**
Silver cyanide	506649	Silver cyanide Ag (CN)	1*	4	P104	X	1 (0.454)
Silver cyanide Ag (CN)	506649	Silver Cyanide	1*	4	P104	X	1 (0.454)
Silver nitrate	7761888		1	1		X	1 (0.454)
Silvex (2,4,5-TP)	93721	Propionic acid, 2-(2,4,5-trichlorophenoxy)-2,4,5-TP acid	100	1,4	U233	B	100 (45.4)
Sodium	7440235		1,000	1		A	10 (4.54)
Sodium arsenate	7631892		1,000	1		X	1 (0.454)
Sodium arsenite	7784465		1,000	1		X	1 (0.454)
Sodium azide	26628228		1*	4	P105	C	1,000 (454)
Sodium bichromate	10588019		1,000	1		A	10 (4.54)
Sodium bifluoride	1333831		5,000	1		B	100 (45.4)
Sodium bisulfite	7631905		5,000	1		D	5,000 (2,270)
Sodium chromate	7775113		1,000	1		A	10 (4.54)
Sodium cyanide	143339	Sodium cyanide Na (CN)	10	1,4	P106	A	10 (4.54)
Sodium cyanide Na (CN)	143339	Sodium cyanide	10	1,4	P106	A	10 (4.54)
Sodium dodecylbenzenesulfonate	25155300		1,000	1		C	1,000 (454)
Sodium fluoride	7681494		5,000	1		C	1,000 (454)
Sodium hydrosulfide	16721805		5,000	1		D	5,000 (2,270)
Sodium hydroxide	1310732		1,000	1		C	1,000 (454)
Sodium hypochlorite	7681529		100	1		B	100 (45.4)
	10022705						
Sodium methylate	124414		1,000	1		C	1,000 (454)
Sodium nitrite	7632000		100	1		B	100 (45.4)
Sodium phosphate, dibasic	7558794		5,000	1		D	5,000 (2,270)
	100039324						
	10140655						
Sodium phosphate, tribasic	7601549		5,000	1		D	5,000 (2,270)
	7758294						
	7785844						
	10101890						
	10124568						
	10361894						
Sodium selenite	10102188		1,000	1		B	100 (45.4)
	7782823						

Hazardous Substances and Reportable Quantities [Note: All Comments/Notes Are at the End of This Table]							
Hazardous Substance	CASRN	Regulatory Synonyms	Statutory			Final RQ	
			RQ	Code	RCRA Waste Number	Category	Pounds (Kg)
Streptozotocin	18883664	D-Glucose, 2-deoxy-2-[(methyl-nitrosoamino)-carbonyl]amino]- Glucopyranose, 2-deoxy-2-(3-methyl-3-nitrosoureido)-	1*	4	U206	X	1 (0.454)
Strontium chromate	7789062		1,000	1		A	10 (4.54)
Strychnidin-10-one	57249	Strychnine, & salts	10	1,4	P108	A	10 (4.54)
Strychnidin-10-one, 2,3-dimethoxy	357573	Brucine	1*	4	P108	B	100 (45.4)
Strychnine, & salts	57249	Strychnidin-10-one	10	1,4	P108	A	10 (4.54)
Styrene	100425		1,000	1		C	1,000 (454)
Sulfur monochloride	12771083		1,000	1		C	1,000 (454)
Sulfur phosphide	1314803	Phosphorus pentasulfide Phosphorus sulfide	100	1,4	U189	B	100 (45.4)
Sulfuric acid	7664939		1,000	1		C	1,000 (454)
	8014957						
Sulfuric acid, dithallium (1 +) salt	7446188	Thallium (I) sulfate	1,000	1,4	P115	B	100 (45.4)
	10031591						
Sulfuric acid, dimethyl ester	77781	Dimethyl sulfate	1*	4	U103	B	100 (45.4)
2,4,5-T acid	93765	Acetic acid, (2,4,5-trichlorophenoxy) 2,4,5-T	100	1,4	U232	C	1,000 (454)
2,4,5-T amines	2008460		100	1		D	5,000 (2,270)
	1319728						
	3813147						
	6369966						
	6369977						
2,4,5-T esters	93798		100	1		C	1,000 (454)
	1928478						
	2545597						
	25168154						
	61792072						
2,4,5-T salts	13560991		100	1		C	1,000 (454)
2,4,5-T	93765	Acetic acid, (2,4,5-trichlorophenoxy) 2,4,5-T acid	100	1,4	U232	C	1,000 (454)
TDE	72548	Benzene, 1,1'-(2,2-dichloroethylidene)bis [4-chloro-DDD 3,3'DDD	1	1,2,4	U060	X	1 (0.454)
1,2,4,5-Tetrachlorobenzene	95943	Benzene, 1,2,4,5-tetrachloro-	1*	4	U207	D	5,000 (2,270)
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	1746016		1*	2		X	1 (0.454)
1,1,1,2-Tetrachloroethane	630206	Ethane, 1,1,1,2-tetrachloro-	1*	4	U208	B	100 (45.4)
1,1,2,2-Tetrachloroethane	79345	Ethane, 1,1,2,2-tetrachloro-	1*	2,4	U209	B	100 (45.4)

Hazardous Substances and Reportable Quantities [Note: All Comments/Notes Are at the End of This Table]							
Hazardous Substance	CASRN	Regulatory Synonyms	Statutory			Final RQ	
			RQ	Code	RCRA Waste Number	Category	Pounds (Kg)
Tetrachloroethene	127184	Ethene, tetrachloro- Perchloroethylene	1*	2,4	U210	B	100 (45.4)
Tetrachloroethylene	127184	Tetrachloroethylene Ethene, tetrachloro- Perchloroethylene Tetrachloroethane	1*	2,4	U210	B	100 (45.4)
2,3,4,6-Tetrachlorophenol	58902	Phenol, 2,3,4,6-tetrachloro-	1*	4	U212	A	10 (4.54)
Tetraethyl lead	78002	Plumbane, tetraethyl-	100	1,4	P110	A	10 (4.54)
Tetraethyl pyrophosphate	107493	Diphosphoric acid, tetraethyl ester	100	1,4	P111	A	10 (4.54)
Tetraethyldithiopyrophosphate	3689245	Thiodiphosphoric acid, tetraethyl ester	1*	4	P109	B	100 (45.4)
Tetrahydrofuran	109999	Furan, tetrahydro-	1*	4	U213	C	1,000 (454)
Tetranitromethane	509148	Methane, tetranitro-	1*	4	P112	A	10 (4.54)
Tetraphosphoric acid, hexaethyl ester	757584	Hexaethyl tetraphosphoate	1*	4	P062	B	100 (45.4)
Thallic oxide	1314325	Thallium oxide TI2O3	1*	4	P113	B	100 (45.4)
Thallium††	7440280		1*	2		C	1,000 (454)
Thallium and compounds	N.A.		1*	2			**
Thallium (I) acetate	563688	Acetic acid, thallium(1 +) salt	1*	4	U214	B	100 (45.4)
Thallium (I) carbonate	6533739	Carbonic acid, dithallium(1 +) salt	1*	4	U215	B	100 (45.4)
Thallium (I) chloride	7791120	Thallium chloride TICI	1*	4	U216	B	100 (45.4)
Thallium chloride TICI	7791120	Thallium(I) chloride	1*	4	U216	B	100 (45.4)
Thallium (I) nitrate	10102451	Nitric acid, thallium (1 +) salt	1*	4	U217	B	100 (45.4)
Thallium oxide TI2O3	1314325	Thallic oxide	1*	4	P113	B	100 (45.4)
Thallium selenite	12039520	Selenious acid, dithallium(1 +) salt	1*	4	P114	C	1,000 (454)
Thallium (I) sulfate	7446186	Sulfuric acid, dithallium(1 +) salt	1,000	1,4	P115	B	100 (45.4)
	10031591						
Thioacetamide	62555	Ethanethioamide	1*	4	U218	A	10 (4.54)
Thiodiphosphoric acid, tetraethyl ester	3689245	Tetraethyldithiopyrophosphate	1*	4	P109	B	100 (45.4)
Thiofanox	39196184	2-Butanone, 3,3-dimethyl-1-(methylthio)-, O[(methylamino)carbonyl] oxime	1*	4	P045	B	100 (45.4)
Thioimidodicarbonic diamide [(H2N)C(S)]2NH	541537	Dithiobiuret	1*	4	P049	B	100 (45.4)
Thiomethanol	74931	Methanethiol Methylmercaptan	100	1,4	U153	B	100 (45.4)
Thioperoxydicarbonic diamide (H2N)C(S)]2S2, tetramethyl-	137268	Thiram	1*	4	U244	A	10 (4.54)
Thiophenol	108985	Benzenethiol	1*	4	P014	B	100 (45.4)
Thiosemicarbazide	79196	Hydrazinecarbothioamide	1*	4	P116	B	100 (45.4)
Thiourea	62566		1*	4	U219	A	10 (4.54)
Thiourea, (2-chlorophenyl)-	5344821	1-(o-Chlorophenyl)thiourea	1*	4	P026	B	100 (45.4)

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Hazardous Substance	CASRN	Regulatory Synonyms	Statutory			Final RQ	
			RQ	Code	RCRA Waste Number	Category	Pounds (Kg)
Thiourea, 1-naphthalenyl-	86884	alpha-Naphthylthiourea	1*	4	P072	B	100 (45.4)
Thiourea, phenyl-	103855	Phenylthioures	1*	4	P093	B	100 (45.4)
Thiram	137268	Thioperoxydicarbonic diamide [(H2N)C(S)] 2S2, tetramethyl-	1*	4	U244	A	10 (4.54)
Toluene	108883	Benzene, methyl-	1,000	1,2,4	U220	C	1,000 (454)
Toluenediamine	95807	Benzenediamine, ar-methyl-	1*	4	U221	A	10 (4.54)
	496720						
	823405						
	25376458						
Toluene diisocyanate	584849	Benzene, 1,3-diisocyanatomethyl-	1*	4	U223	B	100 (45.4)
	91087						
	26471625						
o-Toluidine	95534	Benzenamine, 2-methyl-	1*	4	U328	B	100 (45.4)
p-Toluidine	106490	Benzenamine, 4-methyl-	1*	4	U353	B	100 (45.4)
o-Toluidine hydrochloride	636215	Benzenamine, 2-methyl-, hydrochloride	1*	4	U222	B	100 (45.4)
Toxaphene	8001352	Camphene, octachloro-	1*	1,2,4	P123	X	1 (0.454)
2,4,5-TP acid	93721	Propionic acid, 2-(2,4,5- trichlorophenoxy)- Silvex (2,4,5-TP)	100	1,4	U233	B	100 (45.4)
2,4,5-TP esters	32534955		100	1		B	100 (45.4)
1H-1,2,4-Triazol-3-amine	61825	Amitrole	1*	4	U011	A	10 (4.54)
Trichlorfon	52686		1,000	1		B	100 (45.4)
1,2,4-Trichlorobenzene	120821		1*	2		B	100 (45.4)
1,1,1-Trichloroethane	71556	Ethane, 1,1,1-trichloro- Methyl chloroform	1*	2,4	U226	C	1,000 (454)
1,1,2-Trichloroethane	79005	Ethane, 1,1,2-trichloro-	1*	2,4	U227	B	100 (45.4)
Trichloroethene	79016	Ethene, trichloro- Trichloroethylene	1,000	1,2,4	U228	B	100 (45.4)
Trichloroethylene	79016	Ethene, trichloro- Trichloroethene	1,000	1,2,4	U228	B	100 (45.4)
Trichloromethanesulfonyl chloride	594423	Methanesulfonyl chloride, trichloro-	1*	4	P118	B	100 (45.4)
Trichloromonofluoromethane	75694	Methane, trichlorofluoro-	1*	4	U121	D	5,000 (2,270)
Trichlorophenol	25167822		10	1		A	10 (4.54)
2,3,4-Trichlorophenol	15950660						
2,3,5-Trichlorophenol	933788						
2,3,6-Trichlorophenol	933755						
2,4,5-Trichlorophenol	95954	Phenol, 2,4,5-trichloro-	10*	1,4	U230	A	10 (4.54)
2,4,6-Trichlorophenol	88062	Phenol, 2,4,6-trichloro-	10*	1,2,4	U231	A	10 (4.54)
3,4,5-Trichlorophenol	609198						
2,4,5-Trichlorophenol	95954	Phenol, 2,4,5-trichloro-	10*	1,4	U230	A	10 (4.54)

Hazardous Substances and Reportable Quantities (Note: All Comments/Notes Are at the End of This Table)							
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			RQ	Code	RCRA Waste Number	Category	Pounds (Kg)
2,4,6-Trichlorophenol	88062	Phenol, 2,4,6-trichloro-	10	1,2,4	U231	A	10 (4.54)
Triethanolamine dodecylbenzenesulfonate	27323417		1,000	1		C	1,000 (454)
Triethylamine	121448		5,000	1		D	5,000 (2,270)
Trimethylamine	75503		1,000	1		B	100 (45.4)
1,3,5-Trinitrobenzene	99354	Benzene, 1,3,5-trinitro-	1*	4	U234	A	10 (4.54)
1,3,5-Trioxane, 2,4,6-trimethyl-	123637	Paraldehyde	1*	4	U182	C	1,000 (454)
Tris(2,3-dibromopropyl) phosphate	126727	1-Propanol, 2,3-dibromo-, phosphate [(3:1)]	1*	4	U235	A	10 (4.54)
Trypan blue	72571	2,7-Naphthalenedisulfonic acid, 3,3'-3,3'-dimethyl-(1,1'-biphenyl)-4,4'-diyl)-bis(azo)   bis(5-amino-4-hydroxy)-te-trasodium salt	1*	4	U236	A	10 (4.54)
Unlisted Hazardous Wastes Characteristic of Corrosivity	N.A.		1*	4	D002	B	100 (45.4)
Unlisted Hazardous Wastes Characteristics: Characteristic of Toxicity:	N.A.		1*	4			
Arsenic (D004)	N.A.		1*	4	D004	X	1 (0.454)
Barium (D005)	N.A.		1*	4	D005	C	1,000 (454)
Benzene (D018)	N.A.		1,000	1,2,3,4	D018	A	10 (4.54)
Cadmium (D006)	N.A.		*1	4	D006	A	10 (4.54)
Carbon tetrachloride (D019)	N.A.		5,000	a,2,4	D019	A	10 (4.54)
Chlordane (D020)	N.A.		1	1,2,4	D020	X	1 (0.454)
Chlorobenzene (D021)	N.A.		100	1,2,4	D021	B	100 (45.4)
Chloroform (D022)	N.A.		5,000	1,2,4	D022	A	10 (4.54)
Chromium (D017)	N.A.		*1	4	D007	A	10 (4.54)
o-Cresol (D023)	N.A.		1,000	1,4	D023	C	1,000 (454)
m-Cresol (D024)	N.A.		1,000	1,4	D024	C	1,000 (454)
p-Cresol (D024)	N.A.		1,000	1,4	D025	C	1,000 (454)
Cresol (D026)	N.A.		1,000	1,4	D026	C	1,000 (454)
2,4-D (D016)	N.A.		100	1,4	D016	B	100 (45.4)
1,4-Dichlorobenzene (D027)	N.A.		100	1,2,4	D027	B	100 (45.4)
1,2-Dichloroethane (D028)	N.A.		5,000	1,2,4	D028	B	100 (45.4)
1,1-Dichloroethylene (D029)	N.A.		5,000	1,2,4	D029	B	100 (45.4)
2,4-Dinitrotoluene (D030)	N.A.		1,000	1,2,4	D030	A	10 (4.54)
Endrin (D012)	N.A.		1	1,4	D012	X	1 (0.454)
Heptachlor (and epoxide) (D031)	N.A.		1	1,2,4	D031	X	1 (0.454)
Hexachlorobenzene (D032)	N.A.		*1	2,4	D032	A	10 (4.54)
Hexachlorobutadiene (D033)	N.A.		*1	2,4	D033	X	1 (0.454)
Hexachloroethane (D034)	N.A.		*1	2,4	D034	B	100 (45.4)

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Lead (008)	N.A.		*1	4	D008	A	10 (4.54)
Lindane (D013)	N.A.		1	1,4	D013	X	1 (0.454)
Mercury (D009)	N.A.		*1	4	D009	X	1 (0.454)
Methoxychlor (D014)	N.A.		1	1,4	D014	X	1 (0.454)
Methyl ethyl ketone (D035)	N.A.		*1	4	D035	D	5,000 (2,270)
Nitrobenzene (D036)	N.A.		1,000	1,2,4	D036	C	1,000 (454)
Pentachlorophenol (D037)	N.A.		10	1,2,4	D037	A	10 (4.54)
Pyridine (D038)	N.A.		*1	4	D038	C	1,000 (454)
Selenium (D010)	N.A.		*1	4	D010	A	10 (4.54)
Silver (D011)	N.A.		*1	4	D011	X	1 (0.454)
Tetrachloroethylene (D039)	N.A.		*1	2,4	D039	B	100 (45.4)
Toxaphene (D015)	N.A.		1	1,4	D015	X	1 (0.454)
Trichloroethylene (D040)	N.A.		1,000	1,2,4	D040	B	100 (45.4)
2,4,5-Trichlorophenol (D041)	N.A.		10	1,4	D041	A	10 (4.54)
2,4,6-Trichlorophenol (D042)	N.A.		10	1,2,4	D042	A	10 (4.54)
2,4,5-TP (D017)	N.A.		100	1,4	D017	B	100 (45.4)
Vinyl chloride (D043)	N.A.		*1	2,3,4	D043	X	1 (0.454)
Unlisted Hazardous Wastes Characteristic of Ignitability	N.A.		1*	4	D001	B	100 (45.4)
Unlisted Hazardous Wastes Characteristic of Reactivity	N.A.		1*	4	D003	B	100 (45.4)
Uracil mustard	66751	2,4-(1H,3H)-Pyrimidinedione, 5-bis(2-chloroethyl)amino]-	1*	4	U237	A	10 (4.54)
Uranyl acetate	541093		5,000	1		B	100 (45.4)
Uranyl nitrate	10102064		5,000	1		B	100 (45.4)
	36478769						
Urea, N-ethyl-N-nitroso-	759739	N-Nitroso-N-ethylurea	1*	4	U176	X	1 (0.454)
Urea, N-methyl-N-nitroso	684935	N-Nitroso-N-methylurea	1*	4	U177	X	1 (0.454)
Vanadic acid, ammonium salt	7803556	Ammonium vanadate	1*	4	P119	C	1,000 (454)
Vanadium oxide V205	1314621	Vanadium pentoxide	1,000	1,4	P120	C	1,000 (454)
Vanadium pentoxide	1314621	Vanadium oxide V205	1,000	1,4	P120	C	1,000 (454)
Vanadyl sulfate	27774136		1,000	1		C	1,000 (454)
Vinyl chloride	75014	Ethen, chloro-	1*	2,3,4	U043	X	1 (0.454)
Vinyl acetate	108054	Vinyl acetate monomer	1,000	1		D	5,000 (2,270)
Vinyl acetate monomer	108054	Vinyl acetate	1,000	1		D	5,000 (2,270)
Vinylamine, N-methyl-N-nitroso-	4549400	N-Nitrosomethylvinylamine	1*	4	P084	A	10 (4.54)
Vinylidene chloride	75354	Ethene, 1,1-dichloro-1,1-Dichloroethylene	5,000	1,2,4	U078	B	100 (45.4)

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Warfarin, & salts, when present at concentrations greater than 0.3%	81812	2H-1-Benzopyran-2-one, 4-hydroxy-3-(3-oxo-1-phenyl-butyl)-, & salts, when present at concentrations greater than 0.3%	1*	4	P001	B	100 (45.4)
Xylene (mixed)	1330207	Benzene, dimethyl	1,000	1,4	U239	C	1,000 (454)
m-Benzene, dimethyl	108383	m-Xylene					
o-Benzene, dimethyl	95476	o-Xylene					
p-Benzene, dimethyl	106423	p-Xylene					
Xylenol	1300716		1,000	1		C	1,000 (454)
Yohimban-16-carboxylic acid, 11,17-dimethoxy-18-[(3,4,5-trimethoxybenzoyl)oxy]-, methyl ester (3beta,16beta,17alpha,18beta,20alpha)-	50555	Reserpine	1*	4	U200	D	5,000 (2,270)
Zinc††	7440666		1*	2		C	1,000 (454)
Zinc and compounds	N.A.		1*	2			**
Zinc acetate	557346		1,000	1		C	1,000 (454)
Zinc ammonium chloride	52628258		5,000	1		C	1,000 (454)
	14639975						
	14639986						
Zinc borate	1332076		1,000	1		C	1,000 (454)
Zinc bromide	7699458		5,000	1		C	1,000 (454)
Zinc carbonate	3486359		1,000	1		C	1,000 (454)
Zinc chloride	7646857		5,000	1		C	1,000 (454)
Zinc cyanide	557211	Zinc cyanide Zn(CN)2	10	1,4	P121	A	10 (4.54)
Zinc cyanide Zn(CN)2	557211	Zinc cyanide	10	1,4	P121	A	10 (4.54)
Zinc fluoride	7783495		1,000	1		C	1,000 (454)
Zinc formate	557415		1,000	1		C	1,000 (454)
Zinc hydrosulfite	7779864		1,000	1		C	1,000 (454)
Zinc nitrate	7779886		5,000	1		C	1,000 (454)
Zinc phenosulfonate	127822		5,000	1		D	5,000 (2,270)
Zinc phosphide	1314847	Zinc phosphide Zn3P2, when present at concentrations greater than 10%	1,000	1,4	P122	B	100 (45.4)
Zinc phosphide Zn3P2, when present at concentrations greater than 10%	1314847	Zinc phosphide	1,000	1,4	P122	B	100 (45.4)
Zinc silicofluoride	16871719		5,000	1		D	5,000 (2,270)
Zinc sulfate	7733020		1,000	1		C	1,000 (454)
Zirconium nitrate	13746899		5,000	1		D	5,000 (2,270)

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Zirconium potassium fluoride	16923958		5,000	1		C	1,000 (454)
Zirconium sulfate	14644612		5,000	1		D	5,000 (2270)
Zirconium tetrachloride	10026116		5,000	1		D	5,000 (2270)
F001 The following spent halogenated solvents used in degreasing; all spent solvent mixtures/blends used in degreasing containing, before use, a total of 10% or more (by volume) of one or more of the above halogenated solvents or those solvents listed in F002, F004, and F005; and still bottoms from the recovery of these spent solvents and spent solvent mixtures.			1*	4	F001	A	10 (4 54)
(a) Tetrachloroethylene	127184		1*	2,4	U210	B	100 (45.4)
(b) Trichloroethylene	79016		1,000	1,2,4	U228	B	100 (45.4)
(c) Methylene chloride	75092		1*	2,4	U080	C	1,000 (454)
(d) 1,1,1-Trichloroethane	71556		1*	2,4	U226	C	1,000 (454)
(e) Carbon tetrachloride	56235		5,000	1,2,4	U211	A	10 (4.54)
(f) Chlorinated fluorocarbons	N.A.					D	5,000 (2,270)
F002 The following spent halogenated solvents; all spent solvent mixtures/blends containing, before use, a total of 10% or more (by volume) of one or more of the above halogenated solvents or those listed in F001, F004, or F005; and still bottoms from the recovery of these spent solvents and spent solvent mixtures.			1*	4	F002	A	10 (4.54)
(a) Tetrachloroethylene	127184		1*	2,4	U210	B	100 (45.4)
(b) Methylene chloride	75092		1*	2,4	U080	C	1,000 (454)
(c) Trichloroethylene	79016		1,000	1,2,4	U228	B	100 (45.4)
(d) 1,1,1-Trichloroethane	71556		1*	2,4	U226	C	1,000 (454)
(e) Chlorobenzene	108907		100	1,2,4	U037	B	100 (45.4)
(f) 1,1,2-Trichloro-1,2,2-trifluoroethane	76131					D	5,000 (2,270)
(g) o-Dichlorobenzene	95501		100	1,2,4	U070	B	100 (45.4)
(h) Trichlorofluoromethane	75694		1*	4	U121	D	5000 (2270)
							(2,270)100

Hazardous Substances and Reportable Quantities [Note: All Comments/Notes Are at the End of This Table]							
Hazardous Substance	CASRN	Regulatory Synonyms	Statutory			Final RQ	
			RQ	Code	RCRA Waste Number	Category	Pounds (Kg)
(i) 1,1,2-Trichloroethane F003 The following spent nonhalogenated solvents and the still bottoms from the recovery of these solvents:	79005		1* 1*	2,4 4	U227 F003	B B	100 (45.4) 100 (45.4)
(a) Xylene						C	1,000 (454)
(b) Acetone	1330207					D	5,000 (2,270)
(c) Ethyl acetate	67641					D	5,000 (2,270)
(d) Ethylbenzene	141786					C	1,000 (454)
(e) Ethyl ether	100414					B	100 (45.4)
(f) Methyl isobutyl ketone	60297					D	5,000 (2,270)
(g) n-Butyl alcohol	108101					D	5,000 (2,270)
(h) Cyclohexanone	71363					D	5,000 (2,270)
(i) Methanol	108941					D	5,000 (2,270)
F004 The following spent nonhalogenated solvents and the still bottoms from the recovery of these solvents:	67561		1*	4	F004	C	1,000 (454)
(a) Cresols/Cresylic acid	1319773		1,000	1,4	U052	C	1,000 (454)
(b) Nitrobenzene	98953		1,000	1,2,4	U169	C	1,000 (454)
F005 The following spent nonhalogenated solvents and the still bottoms from the recovery of these solvents:			1*	4	F005	B	100 (45.4)
(a) Toluene	108883		1,000	1,2,4	U220	C	1,000 (454)
(b) Methyl ethyl ketone	78933		1*	4	U159	D	5,000 (2,270)
(c) Carbon disulfide	75150		5,000	1,4	P022	B	100 (45.4)
(d) Isobutanol	78831		1*	4	U140	D	5,000 (2,270)
(e) Pyridine	110861		1*	4	U196	C	1,000 (454)
			1*	4	F006	A	10 (4.54)

Hazardous Substances and Reportable Quantities [Note: All Comments/Notes Are at the End of This Table]							
Hazardous Substance	CASRN	Regulatory Synonyms	Statutory			Final RQ	
			RQ	Code	RCRA Waste Number	Category	Pounds (Kg)
F006 Wastewater treatment sludges from electroplating operations except from the following processes: (1) sulfuric acid anodizing of aluminum, (2) tin plating on carbon steel, (3) zinc plating (segregated basis) on carbon steel, (4) aluminum or zinc-aluminum plating on carbon steel, (5) cleaning/stripping associated with tin, zinc and aluminum plating on carbon steel, and (6) chemical etching and milling of aluminum.							
F007 Spent cyanide plating bath solutions from electroplating operations.			1*	4	F007	A	10 (4.54)
F008 Plating bath residues from the bottom of plating baths from electroplating operations where cyanides are used in the process.			1*	4	F008	A	10 (4.54)
F009 Spent stripping and cleaning bath solutions from electroplating operations where cyanides are used in the process			1*	4	F009	A	10 (4.54)
F010 Quenching bath residues from oil baths from metal heat treating operations where cyanides are used in the process.			1*	4	F010	A	10 (4.54)
F011 Spent cyanide solution from salt bath pot cleaning from metal heat treating operations.			1*	4	F011	A	10 (4.54)
F012 Quenching wastewater treatment sludges from metal heat treating operations where cyanides are used in the process.			1*	4	F012	A	10 (4.54)

Hazardous Substances and Reportable Quantities [Note: All Comments/Notes Are at the End of This Table]							
Hazardous Substance	CASRN	Regulatory Synonyms	Statutory			Final RQ	
			RQ	Code	RCRA Waste Number	Category	Pounds (Kg)
F019 Wastewater treatment sludges from the chemical conversion coating of aluminum except from zirconium phosphating in aluminum can washing when such phosphating is an exclusive conversion coating process			1	4	F019	A	10 (4.54)
F020 Wastes (except wastewater and spent carbon from hydrogen chloride purification) from the production or manufacturing use (as a reactant, chemical intermediate, or component in a formulating process) of triortetrachlorophenol, or of intermediates used to produce their pesticide derivatives. (This listing does not include wastes from the production of hexachlorophene from highly purified 2,4,5-trichlorophenol.)			1*	4	F020	X	1 (0.454)
F021 Wastes (except wastewater and spent carbon from hydrogen chloride purification) from the production or manufacturing use (as a reactant, chemical intermediate, or component in a formulating process) of pentachlorophenol, or of intermediates used to produce its derivatives.			1*	4	F021	X	1 (0.454)
			1*	4	F022	X	1 (0.454)

<b>Hazardous Substances and Reportable Quantities</b> [Note: All Comments/Notes Are at the End of This Table]							
Hazardous Substance	CASRN	Regulatory Synonyms	Statutory			Final RQ	
			RQ	Code	RCRA Waste Number	Category	Pounds (Kg)
<b>F022</b> Wastes (except wastewater and spent carbon from hydrogen chloride purification) from the manufacturing use (as a reactant, chemical intermediate, or component in a formulating process) of tetra-, penta-, or hexachlorobenzenes under alkaline conditions.			1*	4	F022	X	1 (0.454)
<b>F023</b> Wastes (except wastewater and spent carbon from hydrogen chloride purification) from the production of materials on equipment previously used for the production or manufacturing use (as a reactant, chemical intermediate, or component in a formulating process) of tri- and tetrachlorophenols. (This listing does not include wastes from equipment used only for the production or use of hexachlorophene from highly purified 2,4,5-tri-chlorophenol.)			1*		F023	X	1 (0.454)
<b>F024</b> Wastes, including but not limited to distillation residues, heavy ends, tars, and reactor cleanout wastes, from the production of chlorinated aliphatic hydrocarbons, having carbon content from one to five, utilizing free radical catalyzed processes. (This listing does not include light ends, spent filters and filter aids, spent desiccants [sic], wastewater, wastewater treatment sludges, spent catalysts, and wastes listed in Section 261.32 )			1*		F024	X	1 (0.454)

Hazardous Substances and Reportable Quantities (Note: All Comments/Notes Are at the End of This Table)							
Hazardous Substance	CASRN	Regulatory Synonyms	Statutory			Final RQ	
			RQ	Code	RCRA Waste Number	Category	Pounds (Kg)
<b>F025</b> Condensed light ends, spent filters and filter aids, and spent desiccant wastes from the production of certain chlorinated aliphatic hydrocarbons, by free radical catalyzed processes. These chlorinated aliphatic hydro-carbons are those having carbon chain lengths ranging from one to and including five, with varying amounts and positions of chlorine substitution.			1*	4	F025	X	1 (0.454)
<b>F026</b> Wastes (except wastewater and spent carbon from hydrogen chloride purification) from the production of materials on equipment previously used for the manufacturing use (as a reactant, chemical intermediate, or component in a formulating process) of tetra-, penta-, or hexachlorobenzene under alkaline conditions.			1*	4	F026	X	1 (0.454)
<b>F027</b> Discarded unused formulations containing tri-, tetra-, or pentachlorophenol or discarded unused formula-tions containing compounds derived from these chloro-phenols. (This listing does not include formulations containing hexachlorophene synthesized from prepurified 2,4,5-tri-chlorophenol as the sole component.)			1*	4	F027	X	1 (0.454)

Hazardous Substances and Reportable Quantities [Note: All Comments/Notes Are at the End of This Table]							
Hazardous Substance	CASRN	Regulatory Synonyms	Statutory			Final RQ	
			RQ	Code	RCRA Waste Number	Category	Pounds (Kg)
F028 Residues resulting from the incineration or thermal treatment of soil contaminated with EPA, Hazardous Waste Nos. F020, F021, F022, F023, F026, and F027.			1*	4	F028	X	1 (0.454)
F032 Wastewaters (except those that have not come into contact with process contaminants), process residuals, preservative drippage, and spent formulations from wood-preserving processes generated at plants that currently use or have previously used chlorophenolic formulations (except potentially cross-contaminated wastes that have had the F032 waste code deleted in accordance with §261.35 of this chapter or potentially cross-contaminated wastes that are otherwise currently regulated as hazardous wastes [i.e., F034 or F035]), and where the generator does not resume or initiate use of chlorophenolic formulations). This listing does not include K001 bottom sediment sludge from the treatment of wastewater from wood-preserving processes that use creosote and/or pentachlorophenol.			1*	4	F032	X	1 (0.454)

Hazardous Substances and Reportable Quantities (Note: All Comments/Notes Are at the End of This Table)							
Hazardous Substance	CASRN	Regulatory Synonyms	Statutory			Final RQ	
			RQ	Code	RCRA Waste Number	Category	Pounds (Kg)
<b>F034</b> Wastewaters (except those that have not come into contact with process contaminants), process residuals, preservative drippage, and spent formulations from wood-preserving processes generated at plants that use creosote formulations. This listing does not include K001 bottom sediment sludge from the treatment of wastewater from wood-preserving processes that use creosote and/or pentachlorophenol.			1*	4	F034	X	1 (0.454)
<b>F035</b> Wastewaters (except those that have not come into contact with process contaminants), process residuals, preservative drippage, and spent formulations from wood-preserving processes generated at plants that use inorganic preservatives containing arsenic or chromium. This listing does not include K001 bottom sediment sludge from the treatment of wastewater from wood-preserving processes that use creosote and/or pentachlorophenol.			1*	4	F035	X	1 (0.454)

Hazardous Substances and Reportable Quantities [Note: All Comments/Notes Are at the End of This Table]							
Hazardous Substance	CASRN	Regulatory Synonyms	Statutory			Final RQ	
			RQ	Code	RCRA Waste Number	Category	Pounds (Kg)
<b>F037</b> Petroleum refinery primary oil/water/solids separation sludge. Any sludge generated from the gravitational separation of oil/water/solids during the storage or treatment of process wastewaters and oily cooling wastewaters from petroleum refineries. Such sludges include, but are not limited to, those generated in oil/water/solids separators; tanks and impoundments; ditches and other conveyances; sumps; and storm water units receiving dry weather flow. Sludge generated in storm water units that do not receive dry weather flow, sludges generated from non-contact once-through cooling waters segregated for treatment from other process or oily cooling waters, sludges generated in aggressive biological treatment units as defined in §261.31(b)(2) (including sludges generated in one or more additional units after wastewaters have been treated in aggressive biological treatment units) and K051 wastes are not included in this listing.			1*	4	F037	X	1 (0.454)

Hazardous Substances and Reportable Quantities [Note: All Comments/Notes Are at the End of This Table]							
Hazardous Substance	CASRN	Regulatory Synonyms	Statutory			Final RQ	
			RQ	Code	RCRA Waste Number	Category	Pounds (Kg)
<b>P038</b> Petroleum refinery secondary (emulsified) oil/water/solids separation sludge. Any sludge and/or float generated from the physical and/or chemical separation of oil/water/solids in process wastewaters and oily cooling wastewaters from petroleum refineries. Such wastes include, but are not limited to, all sludges and floats generated in: induced air flotation (IAF) units, tanks and impoundments, and all sludges generated in dissolved air flotation (DAF) units. Sludges generated in storm water units that do not receive dry weather flow, sludges generated from once-through noncontact cooling waters segregated for treatment from other process or oil cooling wastes, sludges, and floats generated in aggressive biological treatment units as defined in §261.31(b)(2) (including sludges and floats generated in one or more additional units after wastewaters have been treated in aggressive biological treatment units) and F037, K048, and K051 wastes are not included in this listing.			1*	4	F038	X	1 (0 454)
<b>K001</b> Bottom sediment sludge from the treatment of wastewaters from wood-preserving processes that use creosote and/or pentachloro-phenol.			1*	4	K001	X	1 (0.454)

Hazardous Substances and Reportable Quantities [Note: All Comments/Notes Are at the End of This Table]							
Hazardous Substance	CASRN	Regulatory Synonyms	Statutory			Final RQ	
			RQ	Code	RCRA Waste Number	Category	Pounds (Kg)
K002 Wastewater treatment sludge from the production of chrome yellow and orange pigments.			1*	4	K002	A	10 (4.54)
K003 Wastewater treatment sludge from the production of molybdate orange pigments.			1*	4	K003	A	10 (4.54)
K004 Wastewater treatment sludge from the production of zinc yellow pigments.			1*	4	K004	A	10 (4.54)
K005 Wastewater treatment sludge from the production of chrome green pigments.			1*	4	K005	A	10 (4.54)
K006 Wastewater treatment sludge from the production of chrome oxide green pigments (anhydrous and hydrated).			1*	4	K006	A	10 (4.54)
K007 Wastewater treatment sludge from the production of iron blue pigments.			1*	4	K007	A	10 (4.54)
K008 Oven residue from the production of chrome oxide green pigments.			1*	4	K008	A	10 (4.54)
K009 Distillation bottoms from the production of acetaldehyde from ethylene.			1*	4	K009	A	10 (4.54)
K010 Distillation side cuts from the production of acetaldehyde from ethylene.			1*	4	K010	A	10 (4.54)
K011 Bottom stream from the wastewater stripper in the production of acrylonitrile.			1*	4	K011	A	10 (4.54)
K013 Bottom stream from the acetonitrile column in the production of acrylonitrile.			1*	4	K013	A	10 (4.54)

Hazardous Substances and Reportable Quantities (Note: All Comments/Notes Are at the End of This Table)							
Hazardous Substance	CASRN	Regulatory Synonyms	Statutory			Final RQ	
			RQ	Code	RCRA Waste Number	Category	Pounds (Kg)
K014 Bottoms from the acetonitrile purification column in the production of acrylonitrile.					K014		
K015 Still bottoms from the distillation of benzyl chloride.			1*	4	K015	A	10 (4.54)
K016 Heavy ends or distillation residues from the production of carbon tetrachloride.			1*	4	K016	X	1 (0.454)
K017 Heavy ends (still bottoms) from the purification column in the production of epi-chlorohydrin			1*	4	K017	A	10 (4.54)
K018 Heavy ends from the fractionation column in ethyl chloride production.			1*	4	K018	X	1 (0.454)
K019 Heavy ends from the distillation of ethylene dichloride in ethylene dichloride production.			1*	4	K019	X	1 (0.454)
K020 Heavy ends from the distillation of vinyl chloride in vinyl chloride monomer production.			1*	4	K020	X	1 (0.454)
K021 Aqueous spent antimony catalyst waste from fluoromethanes production.			1*	4	K021	A	10 (4.54)
K022 Distillation bottom tars from the production of phenol/acetone from cumene.			1*	4	K022	X	1 (0.454)
K023 Distillation light ends from the production of phthalic anhydride from naphthalene.			1*	4	K023	D	5,000 (2,270)
K024 Distillation bottoms from the production of phthalic anhydride from naphthalene.			1*	4	K024	D	5,000 (2,270)

Hazardous Substances and Reportable Quantities [Note: All Comments/Notes Are at the End of This Table]							
Hazardous Substance	CASRN	Regulatory Synonyms	Statutory			Final RQ	
			RQ	Code	RCRA Waste Number	Category	Pounds (Kg)
K025 Distillation bottoms from the production of nitrobenzene by the nitration of benzene			1*	4	K025	A	10 (4.54)
K026 Stripping still tails from the production of methyl ethyl pyridines.			1*	4	K026	C	1,000 (454)
K027 Centrifuge and distillation residues from toluene diisocyanate production.			1*	4	K027	A	10 (4.54)
K028 Spent catalyst from the hydrochlorinator reactor in the production of 1,1,1-trichloroethane.			1*	4	K028	X	1 (0.454)
K029 Waste from the product steam stripper in the production of 1,1,1-trichloroethane.			1*	4	K029	X	1 (0.454)
K030 Column bottoms or heavy ends from the combined production of trichloroethylene and perchloroethylene.			1*	4	K030	X	1 (0.454)
K031 By-product salts generated in the production of MSMA and cacodylic acid.			1*	4	K031	X	1 (0.454)
K032 Wastewater treatment sludge from the production of chlordane.			1*	4	K032	A	10 (4.54)
K033 Wastewater and scrub water from the chlorination of cyclopentadiene in the production of chlordane.			1*	4	K033	A	10 (4.54)
K034 Filter solids from the filtration of hexachlorocyclopentadiene in the production of chlordane.			1*	4	K034	A	10 (4.54)
K035 Wastewater treatment sludges generated in the production of creosote.			1*	4	K035	X	1 (0.454)

Hazardous Substances and Reportable Quantities [Note: All Comments/Notes Are at the End of This Table]							
Hazardous Substance	CASRN	Regulatory Synonyms	Statutory			Final RQ	
			RQ	Code	RCRA Waste Number	Category	Pounds (Kg)
K036 Still bottoms from toluene reclamation distillation in the production of disulfoton					K036		
K037 Wastewater treatment sludges from the production of disulfoton.			1*	4	K037	X	1 (0.454)
K038 Wastewater from the washing and stripping of phorate production.			1*	4	K038	A	10 (4.54)
K039 Filter cake from the filtration of diethylphosphorodithioic acid in the production of phorate.			1*	4	K039	A	10 (4.54)
K040 Wastewater treatment sludge from the production of phorate.			1*	4	K040	A	10 (4.54)
K041 Wastewater treatment sludge from the production of toxaphene.			1*	4	K041	X	1 (0.454)
K042 Heavy ends or distillation residues from the distillation of tetrachlorobenzene in the production of 2,4,5-T.			1*	4	K042	A	10 (4.54)
K043 2,6-Dichlorophenol waste from the production of 2,4-D.			1*	4	K043	A	10 (4.54)
K044 Wastewater treatment sludges from the manufacturing and processing of explosives.			1*	4	K044	A	10 (4.54)
K045 Spent carbon from the treatment of wastewater containing explosives.			1*	4	K045	A	10 (4.54)
K046 Wastewater treatment sludges from the manufacturing, formulation and loading of lead-based initiating compounds.			1*	4	K046	A	10 (4.54)

Hazardous Substances and Reportable Quantities (Note: All Comments/Notes Are at the End of This Table)							
Hazardous Substance	CASRN	Regulatory Synonyms	Statutory			Final RQ	
			RQ	Code	RCRA Waste Number	Category	Pounds (Kg)
K047 Pink/red water from TNT operations			1*	4	K047	A	10 (4.54)
K048 DAF float from the petroleum refining industry.			1*	4	K048	A	10 (4.54)
K049 Slop oil emulsion solids from the petroleum refining industry.			1*	4	K049	A	10 (4.54)
K050 Heat exchanger bundle cleaning sludge from the petroleum refining industry			1*	4	K050	A	10 (4.54)
K051 API separator sludge from the petroleum refining industry.			1*	4	K051	A	10 (4.54)
K052 Tank bottoms (leaded from the petroleum refining industry).			1*	4	K052	A	10 (4.54)
K060 Ammonia still lime sludge from coking operations.			1*	4	K060	X	1 (0.454)
K061 Emission control dust/sludge from the primary production of steel in electric furnaces.			1*	4	K061	A	10 (4.54)
K062 Spent pickle liquor generated by steel finishing operations of facilities within the iron and steel industry (SIC Codes 331 and 332).			1*	4	K062	A	10 (4.54)
K064 Acid plant blowdown slurry/sludge resulting from thickening of blowdown slurry from primary copper production.			1*	4	K064	A	10 (4.54)
K065 Surface impoundment solids contained in and dredged from surface impoundments at primary lead smelting facilities.			1*	4	K065	A	10 (4.54)

Hazardous Substances and Reportable Quantities (Note: All Comments/Notes Are at the End of This Table)							
Hazardous Substance	CASRN	Regulatory Synonyms	Statutory			Final RQ	
			RQ	Code	RCRA Waste Number	Category	Pounds (Kg)
K066 Surface impoundment solids contained in and dredged from surface impoundments at primary lead smelting facilities.			1*	4	K066	A	10 (4.54)
K069 Emission control dust/sludge from secondary lead smelting			1*	4	K069	A	10 (4.54)
K071 Brine purification muds from the mercury cell process in chlorine production, where separately prepurified brine is not used.			1*	4	K071	X	1 (0.454)
K073 Chlorinated hydrocarbon waste from the purification step of the diaphragm cell process using graphite anodes in chlorine production.			1*	4	K073	A	10 (4.54)
K083 Distillation bottoms from aniline extraction.			1*	4	K083	B	100 (45.4)
K084 Wastewater treatment sludges generated during the production of veterinary pharmaceuticals from arsenic or organo-arsenic compounds.			1*	4	K084	X	1 (0.454)
K085 Distillation or fractionation column bottoms from the production of chloro-benzenes.			1*	4	K085	A	10 (4.54)
K086 Solvent washes and sludges, caustic washes and sludges, or water washes and sludges from cleaning tubs and equipment used in the formulation of ink from pigments, driers, soaps, and stabilizers containing chromium and lead			1*	4	K086	A	10 (4.54)
K087 Decanter tank tar sludge from coking operations.			1*	4	K087	B	100 (45.4)

Hazardous Substances and Reportable Quantities [Note: All Comments/Notes Are at the End of This Table]							
Hazardous Substance	CASRN	Regulatory Synonyms	Statutory			Final RQ	
			RQ	Code	RCRA Waste Number	Category	Pounds (Kg)
K088 Spent potliners from primary aluminum reduction.			1*	4	K088		
K090 Emission control dust or sludge from ferrochromiumsilicon production.			1*	4	K090		
K091 Emission control dust or sludge from ferrochromium production.			1	4	K091		
K093 Distillation light ends from the production of phthalic anhydride from ortho-xylene.			1*	4	K093	D	5,000 (2,270)
K094 Distillation bottoms from the production of phthalic anhydride from ortho-xylene.			1*	4	K094	D	5,000 (2,270)
K095 Distillation bottoms from the production of 1,1,1-trichloroethane.			1*	4	K095	B	100 (45.4)
K096 Heavy ends from the heavy ends column from the production of 1,1,1-trichloroethane.			1*	4	K096	B	100 (45.4)
K097 Vacuum stripper discharge from the chlordane chlorinator in the production of chlordane			1*	4	K097	X	1 (0.454)
K098 Untreated process wastewater from the production of toxaphene.			1*	4	K098	X	1 (0.454)
K099 Untreated wastewater from the production of 2,4-D.			1*	4	K099	A	10 (4.54)
K100 Waste leaching solution from acid leaching of emission control dust/sludge from secondary lead smelting.			1*	4	K100	A	10 (4.54)

Hazardous Substances and Reportable Quantities [Note: All Comments/Notes Are at the End of This Table]							
Hazardous Substance	CASRN	Regulatory Synonyms	Statutory			Final RQ	
			RQ	Code	RCRA Waste Number	Category	Pounds (Kg)
K101 Distillation tar residues from the distillation of aniline-based compounds in the production of veterinary pharmaceuticals from arsenic or organo-arsenic compounds.			1*	4	K101	X	10 (4.54)
K102 Residue from the use of activated carbon for decolorization in the production of veterinary pharmaceuticals from arsenic or organo-arsenic compounds.			1*	4	K102	X	1 (0.454)
K103 Process residues from aniline extraction from the production of aniline			1*	4	K103	B	100 (45.4)
K104 Combined wastewater streams generated from nitrobenzene/aniline production.			1*	4	K104	A	10 (4.54)
K105 Separated aqueous stream from the reactor product washing step in the production of chlorobenzenes.			1*	4	K105	A	10 (4.54)
K106 Wastewater treatment sludge from the mercury cell process in chlorine production			1*	4	K106	X	1 (0.454)
K107 Column bottoms from product separation from the production of 1,1-dimethylhydrazine (UDMH) from carboxylic acid hydrazines.			10	4	K107	X	10 (4.54)
K108 Condensed column overheads from product separation and condensed reactor vent gases from the production of UDMH from carboxylic acid hydrazides			10	4	K108	X	10 (4.54)

Hazardous Substances and Reportable Quantities [Note: All Comments/Notes Are at the End of This Table]							
Hazardous Substance	CASRN	Regulatory Synonyms	Statutory			Final RQ	
			RQ	Code	RCRA Waste Number	Category	Pounds (Kg)
K109 Spent filter cartridges from product purification from the production of 1,1-dimethylhydrazine (UDMH) from carboxylic acid hydrazides.			10	4	K109	X	10 (4.54)
K110 Condensed column overheads from intermediate separation from the production of UDMH from carboxylic acid hydrazides.			10	4	K110	X	10 (4.54)
K111 Product washwaters from the production of dinitrotoluene via nitration of toluene.			1*	4	K111	A	10 (4.54)
K112 Reaction by-product water from the drying column in the production of toluenediamine via hydrogenation of dinitrotoluene			1*	4	K112	A	10 (4.54)
K113 Condensed liquid light ends from the purification of toluenediamine in the production of toluenediamine via hydrogenation of dinitrotoluene.			1*	4	K113	A	10 (4.54)
K114 Vicinals from the purification of toluenediamine in the production of toluenediamine via hydrogenation of dinitrotoluene.			1*	4	K114	A	10 (4.54)
K115 Heavy ends from the purification of toluenediamine in the production of toluenediamine via hydrogenation of dinitrotoluene.			1*	4	K115	A	10 (4.54)

Hazardous Substances and Reportable Quantities [Note: All Comments/Notes Are at the End of This Table]							
Hazardous Substance	CASRN	Regulatory Synonyms	Statutory			Final RQ	
			RQ	Code	RCRA Waste Number	Category	Pounds (Kg)
K116 Organic condensate from the solvent recovery column in the production of toluene diisocyanate via phosgenation of toluenediamine.			100	4	K116	A	10 (4.54)
K117 Wastewater from the reaction vent gas scrubber in the production of ethylene bromide via bromination of ethene.			1*	4	K117	X	1 (0.454)
K118 Spent absorbent solids from purification of ethylene dibromide in the production of ethylene dibromide.			1*	4	K118	X	1 (0.454)
K123 Process wastewater (including supernates, filtrates, and washwaters) from the production of ethylenedithiocarbamic acid and its salts.			1*	4	K123	A	10 (4.54)
K124 Reactor vent scrubber water from the production of ethylenedithio-carbamic acid and its salts.			1*	4	K124	A	10 (4.54)
K125 Filtration, evaporation, and centrifugation solids from the production of ethylenedithiocarbamic acid and its salts.			1*	4	K125	A	10 (4.54)
K126 Baghouse dust and floor sweepings in milling and packaging operations from the production or formulation of ethylenedithiocarbamic acid and its salts.			1*	4	K126	A	10 (4.54)
K131 Wastewater from the reactor and spent sulfuric acid from the acid dryer in the production of methyl bromide.			100	4	K131	X	100 (45.4)

Hazardous Substances and Reportable Quantities [Note: All Comments/Notes Are at the End of This Table]							
Hazardous Substance	CASRN	Regulatory Synonyms	Statutory			Final RQ	
			RQ	Code	RCRA Waste Number	Category	Pounds (Kg)
K132 Spent absorbent and wastewater solids from the production of methyl bromide.			1,000	4	K132	X	1,000 (454)
K136 Still bottoms from the purification of ethylene dibromide in the production of ethylene dibromide via bromination of ethene.			1*	4	K136	X	1 (0.454)
K141 Process residues from the recovery of coal tar, including, but not limited to, tar collecting sump residues from the production of coke from coal or the recovery of coke by-products produced from coal. This listing does not include K087 (decanter tank tar sludge from coking operations).			1*	4	K141	X	1 (0.454)
K142 Tar storage tank residues from the production of coke from coal or from the recovery of coke by-products produced from coal.			1*	4	K142	X	1 (0.454)
K143 Process residues from the recovery of light oil, including, but not limited to, those generated in stills, decanters, and wash oil recovery units from the recovery of coke by-products produced from coal.			1*	4	K143	X	1 (0.454)
K144 Wastewater treatment sludges from light oil refining, including, but not limited to, intercepting or contamination sump sludges from the recovery of coke by-products produced from coal.			1*	4	K144	X	1 (0.454)

Hazardous Substances and Reportable Quantities [Note: All Comments/Notes Are at the End of This Table]							
Hazardous Substance	CASRN	Regulatory Synonyms	Statutory			Final RQ	
			RQ	Code	RCRA Waste Number	Category	Pounds (Kg)
K145 Residues from naphthalene collection and recovery operations from the recovery of coke by-products produced from coal.			1*	4	K145	X	1 (0.454)
K147 Tar storage tank residues from coal tar refining.			1*	4	K147	X	1 (0.454)
K148 Residues from coal tar distillation, including, but not limited to, still bottoms.			1*	4	K148	X	1 (0.454)

**Notes:**

- † = Indicates the statutory source as defined by 1,2,3, and 4 below.
- †† = No reporting of releases of this hazardous substance is required if the diameter of the pieces of the solid metal released is equal to or exceeds 100 micrometers (0.004 inches).
- ††† = The RQ for asbestos is limited to friable forms only.
- 1 = Indicates that the statutory source for designation of this hazardous substance under CERCLA is CWA Section 311(b)(4).
- 2 = Indicates that the statutory source for designation of this hazardous substance under CERCLA is CWA Section 307(a).
- 3 = Indicates that the statutory source for designation of this hazardous substance under CERCLA is CAA Section 112.
- 4 = Indicates that the statutory source for designation of this hazardous substance under CERCLA is RCRA Section 3001.
- 1\* = Indicates that the 1-pound RQ is a CERCLA statutory RQ.
- # = Indicates that the RQ is subject to change when the assessment of potential carcinogenicity is completed.  
The Agency may adjust the statutory RQ for this hazardous substance in a future rulemaking; until then the statutory RQ applies.
- \$ = The adjusted RQs for radionuclides may be found in Appendix B to this table.
- \* = Indicates that no RQ is being assigned to the generic or broad class.

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